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# THE ILLUSTRATED POULTRY RECORD

*Edited by E.T. Brown.*



MAY  
1913

## THE DEVELOPMENT OF WALES

6<sup>D</sup>  
NET



**ALL**  
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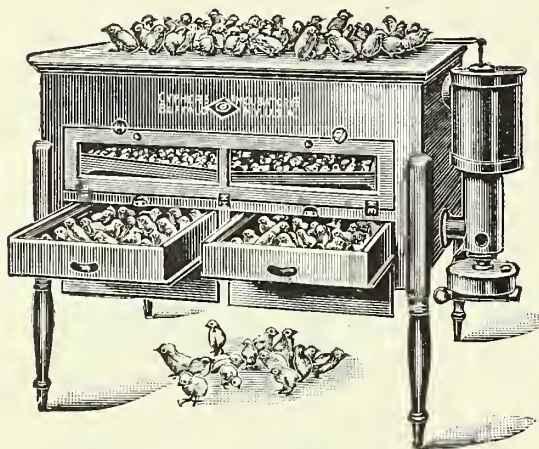
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**R. T. LANG, Ltd.,** Tudor House, Tudor Street, London, E.C.



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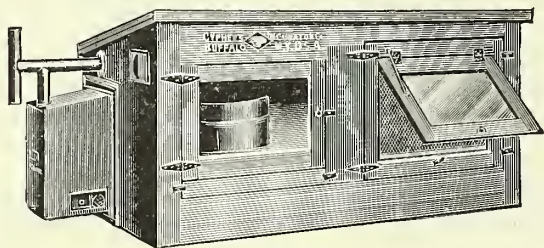
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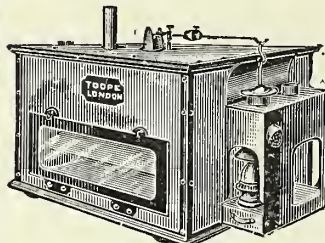
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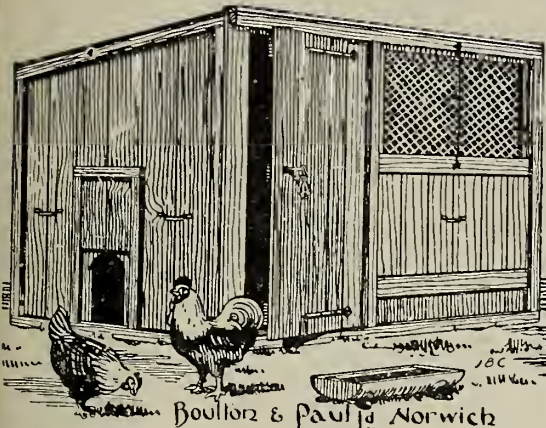
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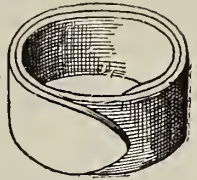
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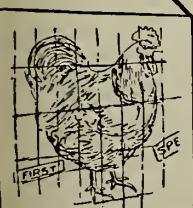


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Produced  
Costing

1/2<sup>d</sup>

Each for  
FOOD







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into believing that every Chicken Meal is SPRATT'S Chicken Meal, or that every Chicken Mixture is "CHIKKO." There is **ONLY ONE** Spratt's Chicken Meal and it is sold in Sealed Bags and Packets plainly printed "SPRATT'S." The word "CHIKKO" is a Registered Trade Mark and applies only to the scientific Dry Chick Food produced by SPRATT'S, which is also packed in sealed bags.



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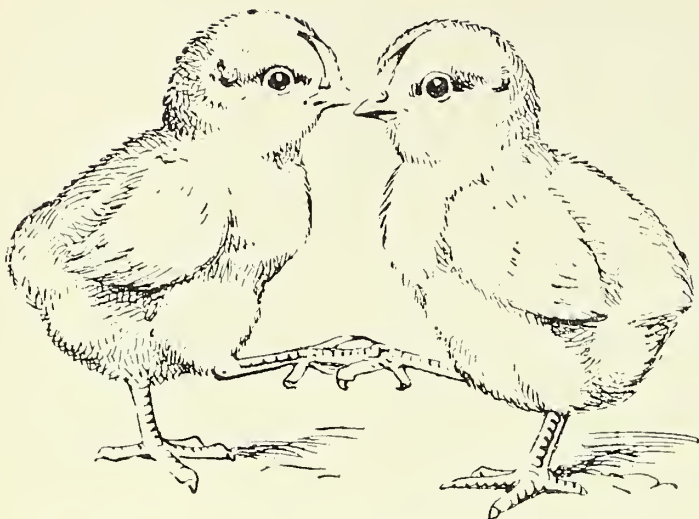
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## Keep them free from intestinal trouble — from which so many chicks die

There are no sick chicks on the Molassine Poultry Farms at Twyford because our years of research and experimental work has enabled us to produce a perfect food for chickens,

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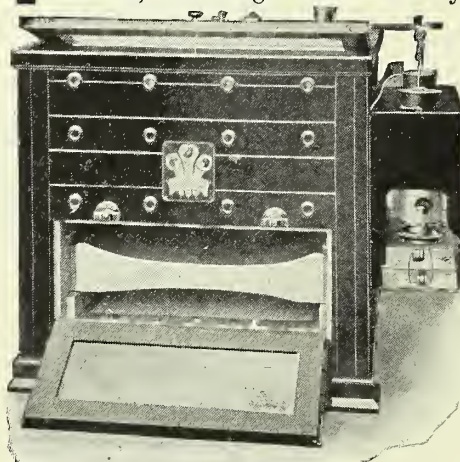
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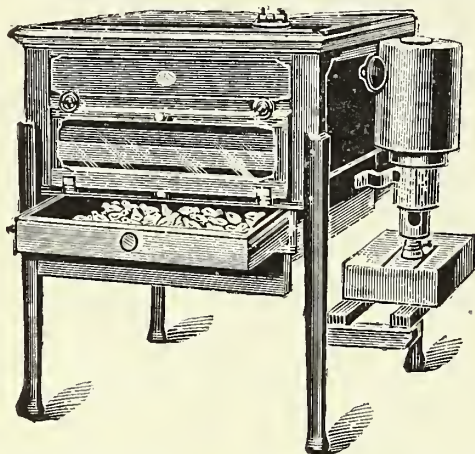
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66     "     "	3 0 0	240     "     "	6 0 0
100    "     "	3 15 0	390     "     "	7 5 0

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Our PATENT SELF-TURNING EGG TRAY turns all the eggs in a second by one movement of the hand without the slightest jar or vibration. The eggs can be turned without opening the door, so that the temperature can be kept absolutely constant. It is an enormous time and labour saver. Thousands flocked to see it at the Dairy, Manchester, and Crystal Palace Shows, and it was the unanimous opinion that it was the best invention ever brought out for the improvement of incubators.

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Orpingtons, White, Buff, Black,  
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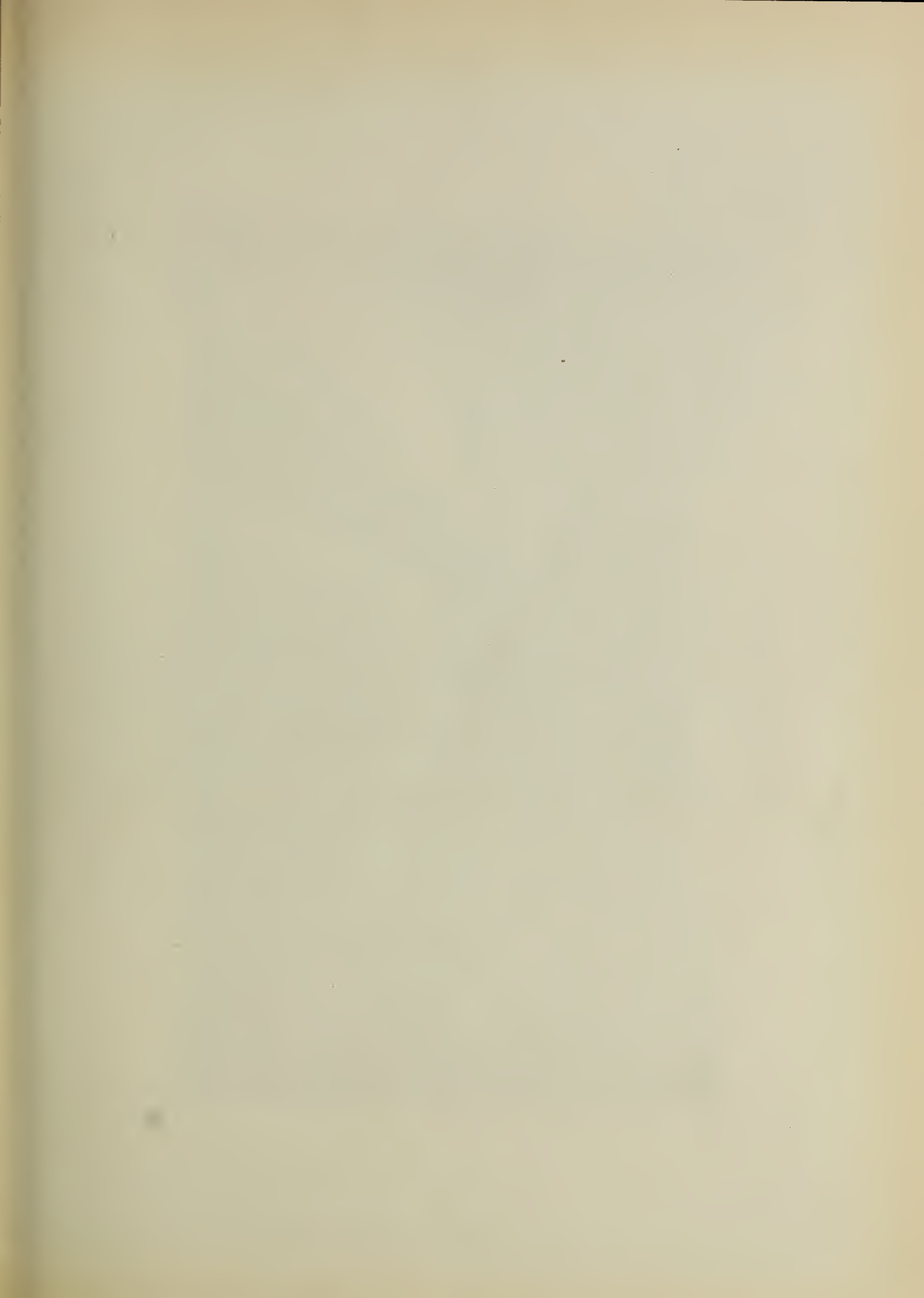
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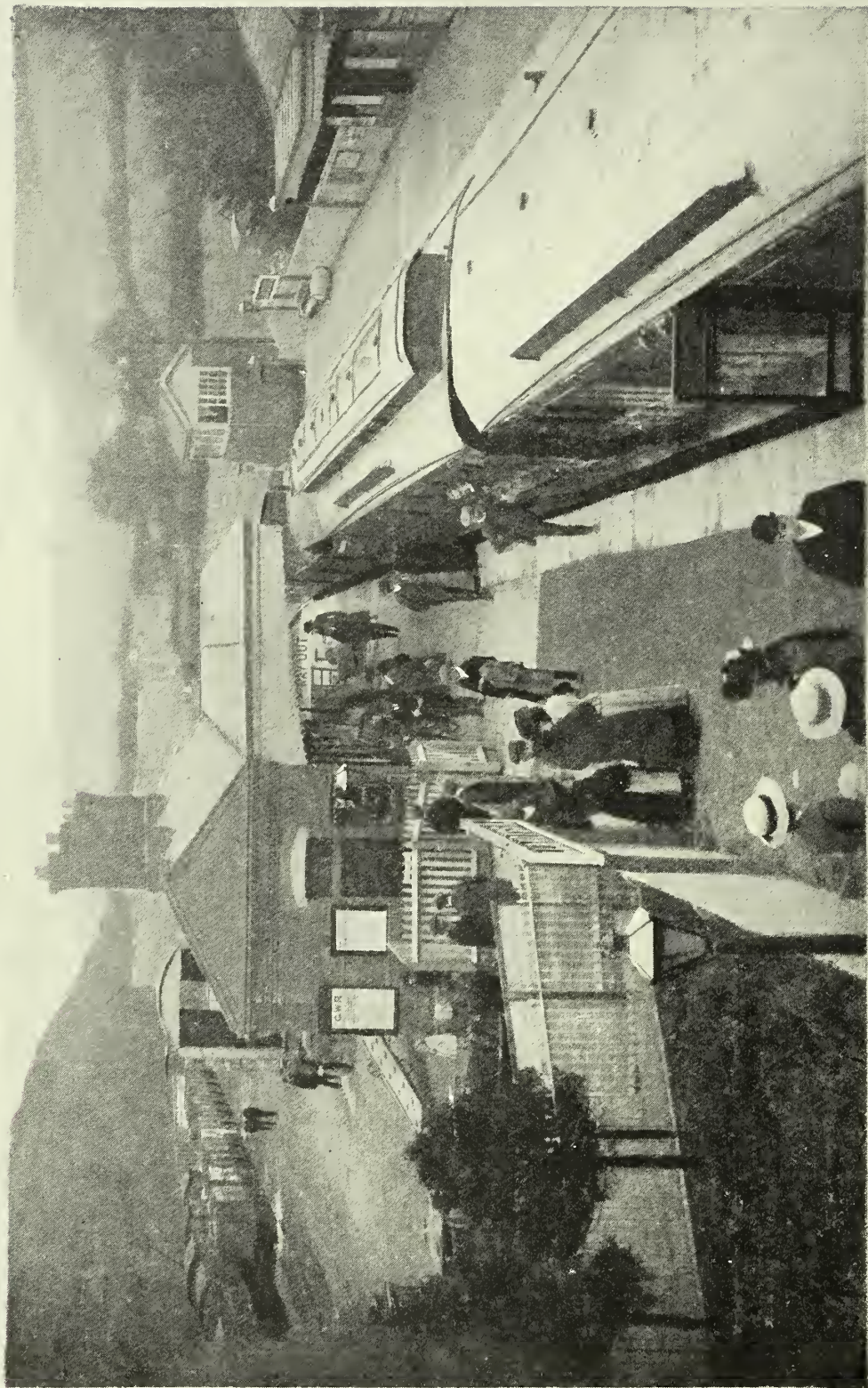
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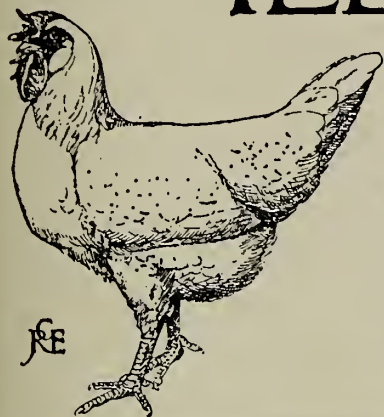


### THE DEVELOPMENT OF WALES.

The original egg train leaving Llandyssil station in May, 1910. On page 375 we illustrate its successor in North Wales, leaving Euston on the morning of the 23rd inst. [Copyright.]



# THE ILLUSTRATED POULTRY RECORD



Vol. V.—No. 8.

May 1, 1913.

Monthly, Price Sixpence.

## DIARY OF THE MONTH.

### EDITORIAL NOTICES.

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*The Editor would like to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.*

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### Happy Anglesey.

In the article on the development of co-operation in the Island of Anglesey, by Col. the Hon. R. Stapleton Cotton, which we print this month, and which tells of what has been and is being done there, he says "there are no foxes in the island." Upon that fact farmers and others in Anglesey are to be congratulated, as they have not to combat an influence which has done more than almost any other to hinder developments in many sections of the country. Under such conditions there is not that clash of interests which has given rise to a very embittered state of affairs elsewhere. This places Anglesey in a specially favoured position, one which should afford producers an opportunity which, if taken advantage of will mean much in the future, and add greatly to the annual returns of those living on the land. Up to a year ago the main difficulty was in respect to outlets and to prices realised, leading to unreliability of quality and supplies which is fatal to success. Thanks, however, to those whose public spirit and enterprise is seen in the establishment of the Anglesey Egg Collecting Depot, Limited, this state of affairs is being completely altered. Within recent times it was by no means uncommon for eggs to be fed to pigs in the time of glut. Such will never recur. We look forward to the time when the production of eggs and poultry will be the most important branch of agriculture in Anglesey, where the climatic and soil conditions are favourable in the extreme.

### A Poultry College on Wheels.

What has been commenced in Anglesey is just as much needed in other parts of North Wales. That is the reason why, as explained in this special issue, the Agricultural Organi-



sation Society, and the National Poultry Organisation Society, working in conjunction with local authorities and private individuals, have selected North Wales for the second egg train in Europe. The experience gained three years ago has proved most valuable, as the demonstration cars on this occasion are much more complete. Unfortunately the dates chosen have prevented our giving as early as we should have wished, full particulars of the tour. These we hope to summarise next month. In the meantime the daily and weekly press, we anticipate, will have satisfied the immediate desire for information. What we have attempted is to give this month special articles which may help to a realisation of the conditions and needs of the northern half of the principality. One of the most satisfactory features is that the Board of Agriculture and the local education authorities and colleges, have delegated representatives to accompany the train, which we trust may be but the first of many such.

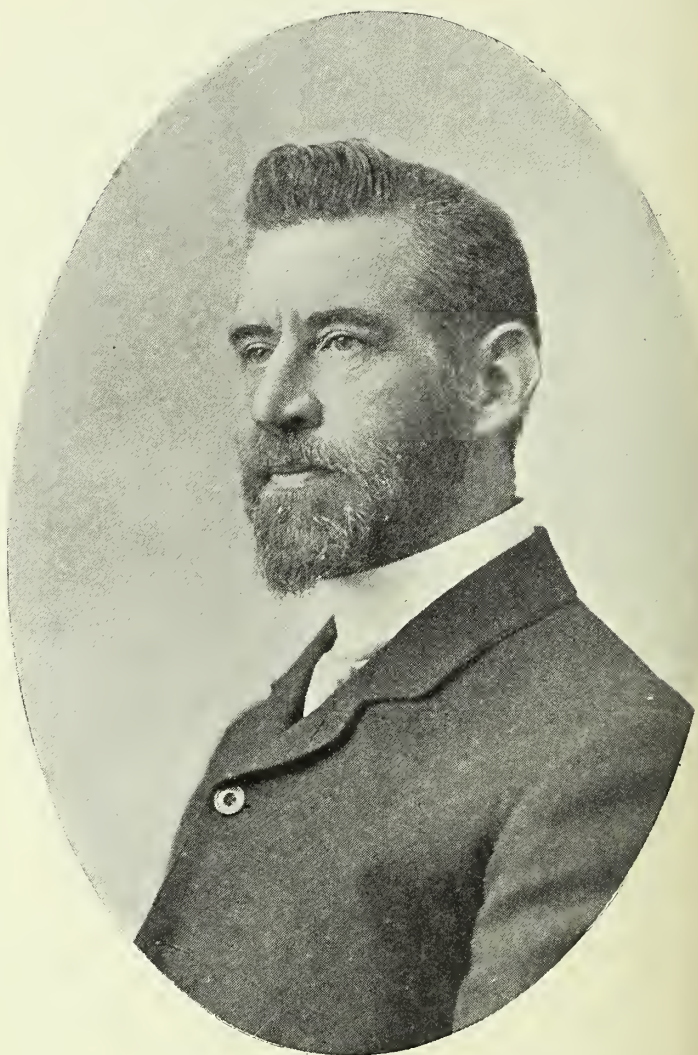
#### The effect of co-operation.

Statements have recently been made indicative of disappointment with co-operative methods. To some extent these may be justified. Frequently, however, blame has to be laid upon the co-operators, not the system, as they fail to support loyally, and expect it to perform the impossible. A co-operative egg is no better than one sold in the ordinary way. Unless, therefore, sale is expedited and guarantees of quality are forthcoming in tangible form, one system is as good as the other. As to competitive prices offered by traders there is another side to the question, which may be best illustrated by what we were recently told concerning a local egg depot, and which could be repeated in several other instances. Prior to the establishment of the depôt, prices had been low in the district. The buyers were in league. When it seemed as if they were losing their supplies, not alone did the prices go up, which was to the good of everyone, but this advance was carried far beyond the legitimate point, in that some of the traders systematically paid higher rates than could be profitable to anyone, as a result of which many of the members, forgetting the benefits already realised and the object that the traders had in view, namely, the killing of this new competitive factor, withdrew their support. Under such circumstances the questions presenting themselves, were, what were the actual gains undoubtedly accruing from the starting of this depot, and, what would be the result if as a result of this unfair competition, it had to close? Whether those concerned will take larger or broader views, or will look only at the immediate result remains to be seen. That

the advance in realised prices has been mainly due to the depôt cannot be questioned.

#### The Late Mr. Harry Wallis.

It is with the deepest regret that all sections of poultry-keepers learnt of the death, as a result of an accident in the hunting field, of Mr. Harry Wallis, a leading member of the poultry club committee, and a former President of that body, as well as the honorary secretary since its establishment of the Langshan club. His kindly and genial presence will be missed in many directions, but nowhere more than at shows. Ever ready to share in any movement



The late Mr. Harry Wallis.

for helping the poultry fancy, he was characterised by no selfish aims, and it was that fact which gave him a unique position. Such can be fully and freely said by those whose ideals were furthest from his own, as in the case of the modern Langshan as distinct from the original type, for he had much to do with the changes referred to. His quiet determination was not easily combatted, especially when combined with great skill in breeding and means enabling him to give place to his ideas.



He is one of a class of true fanciers which can be ill spared, of which there are only too few, and we lament his untimely death. We refer in another part of the paper to Mr. Wallis' career.

#### Farm Institutes.

The publication of a memorandum by the Board of Agriculture and Fisheries on "Agricultural Education in connexion with Farm Schools and Farm Institutes," shows that some progress is being made. In this is set forth the conditions under which grants from the money allocated from the development fund can be obtained for establishment and maintenance of farm schools, farm institutes, and experimental plots. That is all to the good. One of the promises is that in the various areas in England Advisory Councils shall be formed to advise in and control the local agricultural education, which is excellent in principle though very faulty in practice, as we have seen before. It may be asked, what steps will be taken to ensure that the various branches will be represented on these Councils in conformity with the needs of the district? Unless the Board of Agriculture is prepared to use its power of nomination to give an adequate balance to the representation, so far as poultry-keeping is concerned, the thing will be a fiasco. Take such an Advisory Council in the majority of English Counties, it is not too much to say that fox hunters would figure largely thereon, and not a single person would be interested in poultry. We know what that means. Only the scraps would be thrown, and unwillingly, to this branch of agriculture. It is scarcely to be gainsaid that county education committees and their officials are in the main either indifferent or antagonistic to poultry, and do not believe in the pursuit. One striking instance is a county farm serving a large area with a poultry plant which could almost be got into the garden surrounding the dairy buildings. The responsibility, therefore, rests on the Board of Agriculture.

#### An Increase of Imports.

Since the beginning of the year there has been a large increase in supplies of foreign eggs and poultry, thus reversing the tendency of recent years. The Trade and Navigation returns for the first three months show increases in egg imports of 456,554 great hundreds over 1912, and 383,060 great hundreds over 1911 respectively, with advance in values of £185,728 over 1912 and £203,400 over 1911. Russian and Danish supplies account for practically the whole of this increase, nearly 40 per cent. for Russian, and 57 per cent. Danish. Dutch are practically the same as last year, but France, Italy, and Austria-Hungary all show decreases.

The average values for the first quarters of the three years are as follows: 1911, 8s. 7½d. per great hundred; 1912, 9s. 7½d.; 1913, 9s. 1d. Considering the increased volume of Russian imports, these large additional quantities have not affected prices. In poultry the advance is from £342,423 in 1912, to £492,788 in the current year, or 44 per cent. due almost entirely to the United States, from which country the figures are 1912, £49,810, and 1913, £178,827 respectively. The meaning of these increases in both directions has yet to be revealed.

#### The Hen as a Canary.

Is our friend "Home Counties" also among the prophets of intensification? We all remember with what vigour he has denounced poultry farming, both in his book bearing that title and in his various writings. Now we have him in "The World's Work," telling of a poultry-keeper at Takeley in Essex, whose methods are intensive in the extreme, in that the hens are kept under cover all the time, that he used the title quoted above. From the internal evidence of what he has written it would appear that this redoubtable antagonist is likely to become a protagonist. As is always the case the story is well told and worth reading. The place in question is largely based upon the Corning experience in America. As to how far it can be made profitable in this country remains to be proved. If that could be accomplished we should be delighted, as it would enlarge the field of our rural industries. The proof will be, not what can be done in a year or two, but the permanent effect upon the race of fowls so used, that is, bred under these abnormal conditions. Already there are records of enfeeblement of stocks bred through several years under ultra intensive conditions. That is where one of the great dangers lies. If ever this system is to be a success, it must be combined for egg production with breeding from stock on range and growing naturally. A town cowkeeper does not breed from his closely byred animals, but buys from the farm, and either returns the cow there when dry or sells to the butcher.

#### The Farmer's Daughter—and Her Father.

Upon this text "Home Counties" preaches an old sermon on the chance of the farmer's daughter, and how she should manage her father, one which needs to be repeated again and again. He suggests that the large house of a similar type to that now in use by Mr. Toovey and others, and such as has been illustrated in the ILLUSTRATED POULTRY RECORD, will be much less laborious to manage than where a number of separate habitations have to be visited and cleaned, and the inmates fed.



Whether that be so or not we do not propose to discuss. Our present object is to refer to what is said respecting the male parent, namely :

It is of no use talking about what the farmer's daughter might do if her father will not wake up. If this new system is going to be the success that experimenters contend that it will be, the farmer has plainly to adopt a new attitude of mind towards hens. At present they seem to the average agriculturist something like a necessary nuisance.

Once the farmer is awakened to a new view of things we shall make progress more rapidly. He is the hindrance in many cases. Everyone will welcome this new system if it has that effect. It may be true that if he thought the hens were to be kept under cover and not scattered about the farm he would regard them differently, but we think the cause is deeper than that. Still it is worth an effort. We wonder what many farmers would say if their daughters asked for an roofed laying house. Perhaps that depends upon the daughters.

#### What one bad egg did.

The effect of bad eggs upon trade is not often thought of, yet it is very serious. The other day we were in a shop when a case of eggs was opened, which ought to have been first class considering their origin. On examination, one in ten was unfit for boiling purposes. Doubtless these had been put in with the idea that they would not be seen. In this connexion Professor Elford, in a recent address, calls attention to a very important point. He says that a man or woman sitting down to the breakfast table in the morning must have a new-laid egg if they have an egg at all. It seems as though a housekeeper can overlook almost anything else except a bad egg or the man who sent it. Just let a man open up a stale egg on the breakfast table. It does not only mean that he will not eat it, but it means that he refuses to eat eggs for a long time afterwards. Prof. Elford says that he heard a gentleman say this spring: "Fifteen years ago I never knew what it was not to eat two or three eggs every morning, but then I sat down to a breakfast, and as I opened my first egg I cut off the head of a little chicken. For ten long years I never ate an egg. I could not stand it, and for five years more I never ate an egg except under protest." That is an aspect of the case which is often forgotten. It tells, however, heavily against producers.

#### Eggs and Poultry from South Africa.

Hitherto the South African Colonies have been importers of eggs and poultry, but we opine with the greater settlement of the country it will not be long before there is a surplus. In anticipation of

that period Mr. J. Gundle, principal of J. Gundlefinger, of 21, Lime Street, London, E.C., has issued an interesting booklet in English and Dutch in order to stimulate production with a view to an export trade with Europe. The booklet, which is excellently printed and prettily illustrated, says: "As eggs are cheap and plentiful in South Africa during the summer months, experiments might be made in exporting from South Africa to the English market, which would arrive in London when eggs are scarce, and fetch the highest prices. The question of shipping home is not difficult . . . shipments should be arranged so as to arrive in London about the end of November and then weekly until the last shipment, which should arrive in London, say, at the end of January or beginning of February."

Countries on the other side of the Equator have great advantages, if they were realised, and the winter supplies here of fresh eggs are small.

#### Poultry Farming in Roumania.

Statistics compute the number of eggs exported from Roumania annually to France at 107,308,552, and to Germany at 14,464,922. Belgium has also of late commenced to take small quantities, but Great Britain, so far, has not bought eggs from this market. Poultry is exported in fair quantities to Germany, but is generally of small and inferior quality, and the flesh is tasteless in comparison with the general class of bird to be purchased in the English market. The breed is, however, a very strong and sturdy one, and under favourable conditions is capable of great improvement in every way. A good field of enterprise is open for fowl farmers, with the initiative and capital to launch out on a large scale, and certainly a sound and increasing profit could be produced under proper management. The same applies equally to geese and turkeys, especially the latter. It must be remembered that the climate and general surroundings are most favourable, whilst food, being grown at one's door, costs next to nothing.

#### South Australian Poultry Stations.

A scheme for amalgamating the three South Australian poultry stations at Roseworthy, Kybybolite and Murray Bridge, has been approved by the Minister of Agriculture. All the work is to be concentrated at a new station to be at Parafield, about 10 miles from the city of Adelaide, upon which a well equipped farm is to be erected, with a large and varied lot of breeds. This will be a teaching and experiment centre.

#### Co-operation in South Africa.

At the tenth annual conference of the South African Poultry Association it was resolved to make enquiries as to co-operation marketing in Europe and Australia, in order to formulate a scheme to be presented by an influential deputation to the Union Government.



## WHY NORTH WALES ?

SOME NOTES ON THE OPPORTUNITIES FOR DEVELOPMENT.

By EDWARD BROWN F.L.S.



IN connection with the Egg and Poultry Demonstration Train, arranged jointly by the Agricultural Organisation Society and the National Poultry Organisation Society, which will be engaged on its mission at the time these notes are published, the question has been frequently asked "Why North Wales?", as was the case when the first European expedition of this kind visited South Wales three years ago. In the latter instance the selection of that part of the Principality was

organisation to have carried out the scheme. Therefore, the only reply which can be given to county authorities and residents in other sections of the country is "go and do likewise." The cash nexus is the deciding factor in a question of this kind. "Money makes the (egg) train to go."

At the same time to attain the maximum results there must be immediate opportunities for development, for a vast increase of production, and yet with sufficient population to undertake the necessary work. All these conditions



**The Egg Train of 1910. The start from Paddington Station.**

*Copyright]*

due to two factors, first, to a realisation on the part of those concerned as to the imperative need for making an attempt to awaken a greater interest in egg and poultry production, and call attention to the loss arising by the bad methods of marketing in vogue; and, second, to the cordial co-operation of the Great Western Railway. The credit for the present expedition is in a large measure due to the generous financial help given by Lord and Lady Boston, Mr. David Davies, M.P., Col the Hon. R. S. Cotton, and many others, and some of the County Education Committees, without which it would have been impossible for the two societies undertaking the

are met with in Wales, North and South. In respect to climate and soil, to intercommunications with the great consuming centres, as well as the fact that North Wales is a great holiday ground, it has advantages of the greatest possible value. A study of the railway maps show that the London and North Western and the Cambrian Railways, and to a lesser extent the Great Western, run east and west, bringing almost every part of North Wales into direct communication with the Midlands, the North of England and London itself. The way in which the two Companies first named, over whose lines the egg train is running, have co-operated, shows



that they fully realise the importance of developing the production and resources of the areas served by them. It is often the local traffic which is most profitable. To colonise and increase the productiveness of our land is to the interest of all, as of the nation at large.

Further, Wales is a land of small holdings. In the entire principality, out of 61,077 holdings (according to the Agricultural Statistics for 1912 recently published), 42,798 or 70·07 per cent. are under 50 acres in extent. In North Wales that is so to a greater extent. In the six counties comprising that section of the country, out of 29,009 holdings, 21,670, or 74·7 per cent are under 50 acres. In Anglesey the proportion is 85·27 per cent., in Carnarvon, 85·67 per cent., in Flint, 78·2 per cent. In Denbigh, Merioneth and Montgomery the farms are larger. Such conditions, therefore, are favourable in the extreme to the development of poultry keeping. The first step is to bring all influences to bear upon those who are already upon the land to increase their production. It is to the farming community we must look for our food supplies.

In this connexion is a further consideration which is often ignored, namely, the extent of open land which is not recorded as under cultivation. In the whole of Wales such lands embrace upwards of two million acres. Taking the six counties comprising North Wales the figures are as follows :

County	Cultivated Land (area)	Uncultivated Land (area)	Total Area (acres)
Anglesey	148,865	26,830	175,695
Carnarvon	170,595	191,682	362,277
Denbigh	262,081	162,297	424,378
Flint	125,895	36,553	162,448
Merioneth	149,715	268,760	418,475
Montgomery	273,395	232,343	505,738
Totals	1,130,546	918,465	2,049,111

It will be seen, therefore, that these counties are more cultivated than other sections of the principality, the exceptions being Carnarvon and Merioneth. Whilst we may recognise that a considerable portion of the mountain land is unavailable even for pasturage, there is much of that which is included within the second column in the above table upon which poultry could be kept profitably, if the people had access to it. As I have stated before thousands of turkeys might annually be reared on the hilly slate lands, and I cannot see why egg production could not be developed to a great extent, as well as the production of chickens for laying or breeding stock, to be sold in other parts of the country.

My present purpose, however, is not to enter into detail of this kind, which can only be formulated after careful and exhaustive study of the local conditions, but to point out the great

capacity of North Wales for a large extension of the poultry industry, without interference with any existing stock or crop. The land is there already, the climate is favourable, the markets for produce are at hand. Nature has provided the opportunity, man alone is wanting. The following considerations are based upon the poultry census of 1908 and the agricultural statistics of 1912.

In respect to the poultry population of Wales in 1908 it is regrettable that the actual figures in the counties and divisions of that country were not published. The principality is lumped in the whole, which is unsatisfactory, in view of the fact that poultry are not included in the annual statistics as are other classes of stock. I am compelled, therefore, to take the average of the whole of Wales and work out the county averages on that basis. This does not show the local variations. It is, however, all that can be done under the circumstances. Responsibility for any errors must be credited to the Board of Agriculture by reason of the incompleteness of its returns.

In the following table I give (1) the number of adult poultry of all kinds recorded in 1908, as young birds should not be included ; (2) the average per 1,000 acres of cultivated land. To correct the latter I have (3) multiplied the number of adult geese and turkeys by five, on the ground that one of these larger birds are equal to five fowls or ducks.

Class of Poultry	(1) No. of Adults.	(2) Average per 1000 acres of cultivated land	(3) Corrected Average per 1000 acres
Fowls	1,240,000	444·8	444·8
Ducks	103,000	36·9	36·9
Geese	69,000	24·7	123·5
Turkeys	26,000	8·9	44·5
Totals	1,438,000	514·3	649·7

From this it will be seen that the adult poultry in 1908 over the entire principality averaged a fraction under two-thirds of a fowl per acre of cultivated land, which means a little more than 32 fowls per 50 acre farm.

It may be remembered that in the early part of last year I issued statistics for the whole of Great Britain as to the capacity of each county and division in poultry production, which figures may be repeated for North Wales. The entire figures can be seen in the *Journal of the National Poultry Organisation Society* for April, 1912. The bases of the calculations made were that on the farms of the country three fowls, or their equivalent, per acre of cultivated land could be maintained without displacement of any stock now kept or crop grown. That this is a conservative estimate is generally admitted. It would only mean 150 fowls on a fifty acre farm,





more than 4s. per fowl per annum; (2) shown the possible value of the poultry crop in the counties if the increases already named were made; (3) the amount of the added returns which might be received by farmers and others; and (4) the manurial value of fowls at the rate of 3s. 4d. per acre per annum, which may be regarded as fair considering the older birds and the young stock raised every year. The calculations of general returns are inclusive of eggs chickens, etc. consumed and sold, it being assumed that part at least would be used in the households, for which a lower value is allowed.

County	Present Value of Production	Capacity Value in Poultry Production	Possible Increases	Manurial Values
	£	£	£	£
Anglesey	37,213	148,865	111,652	24,817
Carnarvon	42,649	170,595	127,946	28,433
Denbigh	65,520	262,081	196,561	43,680
Flint	31,474	125,895	94,421	20,982
Merioneth	37,429	149,715	112,286	24,952
Montgomery	68,349	273,395	205,046	45,566
Totals	282,634	1,130,446	847,913	188,424

It is, therefore, no small or unimportant branch of agriculture we are out to develop. To add upwards of £847,000, apart from the manurial influences exerted, to the annual returns of these six counties, is an undertaking well worth the efforts of all concerned. Poultry can never be more than a modest moiety of the total agricultural products in any district. At the same time they may represent an important share of the annual returns and profits, for be it specially noted, the sum named would be an addition to the present earnings and not involve any displacement of other stock or crop. The capital involved would be comparatively small, whether to landowner or tenant. There would be no additional rent, the cost of houses and appliances is individually not large, and as the different races of poultry can be rapidly produced, the increased stock is obtainable at a small cost. The labour required can be abundantly compensated by the enhanced returns. What would follow if that £847,000 were yearly poured into North Wales can be better imagined than described. Every section of the community would be benefitted thereby. It may be hoped, therefore, that the North Wales Egg and Poultry Demonstration Train will give a needed impetus in this direction.

There are three ways in which the changes and developments involved may be brought about, namely, by personal effort, by education and by organisation in marketing. All will be in vain unless the farmers and rural residents rise to the occasion, not half heartedly but with determination and vigour, each doing his own

share. Someone has said "there's all sorts of ways of going on, but only one way of standing still." Waiting for someone else will not do it. The personal equation is, therefore, the primary factor. And in this pursuit, as all others, a man gets what he gives. Our experience in South Wales was that a great awakening resulted. To break down old prejudices and to force people out of the old ruts is always a difficult task. It has, however, to be undertaken ere anything can be accomplished. What we want to do is the rousing to effort of people everywhere.

To this end education is essential, and the egg train is that, if nothing else. Up to the present, Welsh county councils and agricultural colleges have done practically nothing for development of the poultry industry. A few odd lectures here and there is all that stands to their credit, and it is a poor show at the best. How can we expect farmers and others to realise the importance of this branch of agriculture when it is practically ignored by those responsible for agricultural education. There are signs that an awakening is taking place in this direction, and it may be that the egg train will have the effect of bringing about a needed change in this pursuit. We can only hope to reach a few of the people in North Wales during this tour. It is for the various authorities to penetrate the whole area with that practical teaching which will enable farmers to adopt newer and better methods.

Inseparable from general efforts for extension and promotion of the poultry industry are the adoption of improved methods of preparation for and marketing. It is here where we have been so lamentably in the rear, the loss arising from which has been and is very great. Unless producers can obtain an adequate return for their supplies they cannot be expected to increase their output. What we require to do is to shift the responsibility on to their shoulders, and make them realise that poor quality and low prices are coterminous. That is where co-operation is essentially valuable, in that, properly carried out, it rewards the careful and penalises the careless. One of the leading objects, therefore, of the egg train is to advocate co-operative methods. What that system is doing for Anglesey may be repeated elsewhere.

### Chicken Hatcheries.

*Farm Poultry* says that it "can conceive of a growth of poultry interests within the next five or ten years which, without reducing the number of small incubators sold, and without increasing the proportion of chicks hatched artificially, would support one or more custom hatcheries near every important town."



MAGWRIAETH DOFEDNOD  
YNG NGHYMURU.THE POULTRY INDUSTRY  
IN WALES.

BY DAVID THOMAS.

Demonstrator on the North Wales Egg Train.



N ystod y blynyddoedd diweddaſ hyn mae magwriaeth dofednod wedi mynd ar gynydd mawr yng Nghymru. Nid oes angen mynd yn ol ymhell iawn i'r amser pan arferasid edrych ar wyau Cymreig gyda chryn lawer o amheuaeth gan fasnachwyr y wlad. Ac nid di-achos ychwaith mo'r amheuaeth o gofio'r modd y triasid yr wyau. Yr oedd yn gwyn gyffredin fod y rhan fwyaf o'r wyau Cymreig ar y farchnad yn ddrwg, a'r canlyniad naturiol o hynny, wrth gwrs, oedd fod y masnachwyr yn edrych i gyfeiriadau eraill i gyflenwi eu hangen. O'r herwydd nid oedd yn syndod yn y byd fod y prisiau mor isel, yn enwedig yn ystod y cyfnod rhwng dechreu Ebrill hyd at ddiwedd yr haf. Yr oedd hyn i'w briodoli bron yn gyfaugwbl i'r hen ddull o farchnata. Arfer gwlad oedd cadw'r wyau nes sicrhau basgedaid weddol lawn cyn eu dwyn i'r siopwr, ac yn aml iawn rhaid oedd aros yn hir. Nid boddlon iawn y siopwr, ychwaith, i dalu am yr wyau mewn arian eithr mewn gwerth, sef mewn nwyddau at wasanaeth yr aelwyd, ac felly ni ddygasid yr wyau i'r siop, fynychaf, nes gwacau o'r cwpwrdd bwyd. Hwyrach y buasai mwyafrif yr wyau erbyn hyn yn bythefnos oed, ac yn fynych iawn elai wythnos arall heibio cyn dyfod cerbyd y masnachwr i'w nol o'r siop, tra nad oedd lawer o frys ar y masnachwr yntau i'w gyrru i ffwrdd i'w gwsmeriaid yn yr ardaloedd poblog. Felly fe welir nad oedd yr wyau hynny, erbyn yr amser y cyrhaeddent fwrdd y boreu-fwyd, yn ffrës mewn modd yn y byd.

Yn ffodus, serch hynny, y mae cyfnewidiad mawr wedi cymryd lle yn hyn o beth yn ystod y blynyddoedd diweddaraf hyn. Nid oes odid i ardal yn y wlad heddyw lle na cheir rhywun, yn gyson, yn dod heibio'r ffermdai a'r bwthynod i gasglu'r wyau, gyda'r canlyniad bodddhaol fod yr wyau yn cael eu gyrru i'r marchnadoedd yn fwy ffres na chynt, ac yn well eu hansawdd o lawer. A goreu'r modd, mae'r hen arfer o gadw'r wyau heb eu gwerthu tan adeg y prisiau uwch hefyd wedi peidio a bod yn arfer mwyach.

Bu ymweliad y Tren Wyau â De Cymru, ryw dair blynedd yn ol, yn foddion i ennyn diddordeb cyffredinol trigolion y Deheubarth, ac i agor llygaid y bobl i'r posibiliadau mawrion ynglyn â magwriaeth dofednod; a rhoddwyd sylw neilltuol i'r darlithoedd a draddodwyd yn gystal ag i'r arddangosiadau ynglyn a'r ymweliad. Fel y gwyddis yn dda, cyndyn iawn



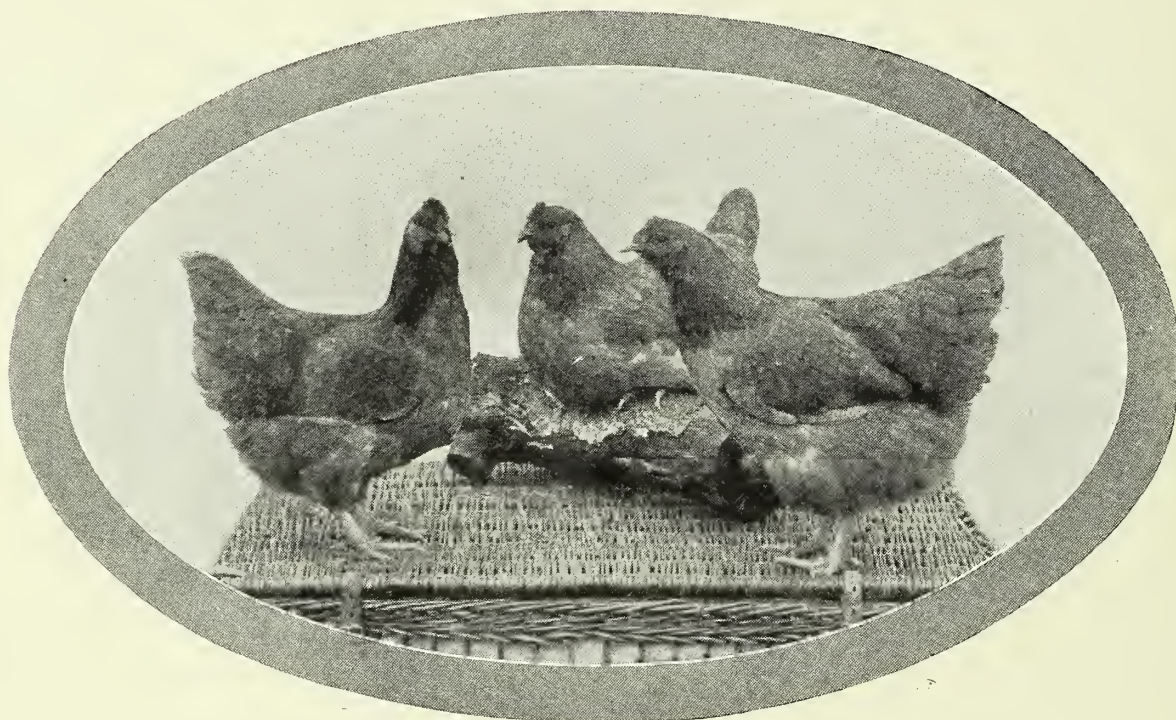
URING recent years the poultry industry has made enormous strides in the Principality. We have not to go back many years to find that Welsh eggs were eyed with suspicion by tradesmen—and not without cause when we consider the way they were handled. It was a general complaint that a high percentage of the eggs placed on the market were absolutely bad, and tradesmen naturally looked to other sources for reliable supplies. Welsh eggs were a drug on the market. The prices obtained were ridiculously low, especially from the beginning of April over the most part of the summer. The cause no doubt was due to the old-fashioned way of marketing. Producers retained the eggs until they secured a good basketful, and this meant considerable time in some instances: then they were taken to the local grocer's shop and household commodities obtained in exchange. The grocer did not care to give cash for eggs; and this was seldom done. Probably the majority of the eggs would be a fortnight old before being taken to the local shop-keeper and in many cases they would be kept for another week at the shop before being collected by the merchant. Even afterwards the egg-merchant displayed no promptitude, as a rule, in despatching his consignment to the retailer, and therefore the eggs would naturally be far from being classed as "new-laid" by the time they reached the consumer's breakfast-table. Fortunately, however, a great change has taken place of late years. There is hardly a district in the whole country now where collectors do not call regularly round the farmsteads and cottages to collect the eggs, with the result that they are placed on the market in a fresher condition than was hitherto the case. The old custom of retaining eggs in anticipation of a rise in price, which at one time was very prevalent, has also disappeared.

The Egg Demonstration Train that visited South Wales three years ago was the means of arousing the inhabitants of the rural districts through which it travelled to the vast possibilities of the egg and poultry industry. The lectures delivered, along with the demonstrations given, were followed with keenness and interest. The average Welsh farmer is generally very reluctant to adopt new methods pertaining to his vocation, but once he is brought to contemplate the matter and to realise that the adop-



yw'r amaethwr Cymreig, fel rheol, i fabwysiadu dulliau newyddion ynglyn a'i alwedigaeth, ond unwaith y ceir ganddo i feddwl drosto ei hun ac i weled fod y llwybrau newyddion i ddwyn elw uniongyrchol iddo ef ei hun, yna ni bydd yn hir iawn yn gadael yr hen ffyrdd er dilyn priffordd ei oes. Llwyddiannus iawn a fu cenhadaeth y Tren Wyau yn y De, a rhoddodd gychwyn i gystadleuaeth fywiog ac iach ymhlith tyddynwyr ac ereill i gyrraedd safon uwch mewn cysylltiad a magu ieir. Dechreuasant ymddiddan a'u gilydd ar y gwahanol rywiogaeth o ieir, ac yn raddol ychwanegasant o'r goreuon at yr eiddo eu hunain, gyda'r canlyniad eu bod yn awr yn cael mwy o wyau nag erioed o'r blaen. Rai blynnyddoedd yn ol anaml y gwelsid cyw o rywiogaeth bur ym muarth yr un tyddyn, ac yr

tion of modern methods will be a direct benefit to himself, he will soon follow in the wake of the new leaders. The mission of the Egg Train was a most successful one, and it has created a healthy competition among the small farmers and cottagers to excel in the art of poultry-keeping. They began to talk to their neighbours about the various breeds of poultry, and in joining together to introduce new blood to their stocks have increased their output of eggs enormously. A few years ago one would rarely see a pure-bred pullet or cockerel amongst the poultry of the peasantry. The flocks were of a non-descript character and sickly in appearance; but now it is a common occurrence to find fine specimens of healthy-looking pure-bred poultry and good-laying crosses. This has naturally



**A Trio of Buff Orpington Pullets.**

oedd yr ieir, gan anlaf, o rywiogaeth gymysg iawn ac yn afiach eu golwg. Eithr arall yw'r hanes heddyw, ac nid peth anghyffredin yw gweld ieir iach eu gwedd a phur eu rhywiogaeth o amgylch bwthynod a thyddynod y wlad. Mae amryw o ganolfannau, *Egg Depots*, hefyd wedi eu hagor ar draws ac ar led fel canlyniad uniongyrchol o ymweliad y Tren Wyau, a'r rheinny oll wedi eu sefydlu ar yr egwyddor gydweithredol ac yn llwyddiannus iawn.

Hyderir y bydd ymweliad agoshaol y Tren Wyau a Gogledd Cymru mor llwyddiannus ag y bu yn y De Mae disgwyl mawr am dano yn y gogleddbarth, ac y mae pob lle dros gredu y gwerthfawrogi yn briodol y wedd addysgol o'r amgylchiad. Cyfaddas iawn yw siroedd mynyddig y Gogledd i fagu dofednod. Yn ol y cyfrifiad a wnaed yn 1908, mewn perthynas i

improved the eggs both in size and colour. A few egg depôts, run on co-operative lines, have been opened as a direct result of the egg train, some of which are doing exceedingly well; but its influence perhaps has been more pronounced in the other directions already referred to.

It is to be hoped that the forthcoming visit of the egg train to the northern part of the Principality will be equally successful. There are great expectations on the part of the people; the visit is eagerly looked forward to and there is every reason to believe that its educative aspect will be greatly appreciated. The hilly character of North Wales makes it very adaptable to successful poultry-keeping. The Poultry Census, taken in 1908 on holdings of one acre and upwards, shows that there were 82 fowls, 10 ducks, 7 geese and 3 turkeys for every 100



ddaliadau o erw i fyny, yr oedd 82 o ieir, 10 hwyad, 7 gwydd a 3 twrci ar gyfer pob can erw o dir yng Nghymru; ac at hyn dylasid rhoddi eto ddofednod y bwthynwyr, sy'n ychwanegu cryn lawer at y rhif. Mae pob bwthynwr trwy'r wlad, ymron, yn cadw ieir ac yn cymryd llawer o falchter yn eu magwriaeth. Yn ol amcan-gyfrif Mr. Edward Brown, F.L.S., efe'nysgrifennu yng nghylchgrawn y *National Poultry Organisation Society* am Ebrill diweddaf, gallasai Gogledd Cymru yn unig, o gadw, ar gyfartaledd, dair iar ar gyfer pob erw, sicrhau gwerth 1,134,240p. y flwyddyn o wyau ac ednod, ac felly nid oes angen i ni betruso nad oes ddigon o le i hyrwyddo magwriaeth dofednod yn ein plith. Yn nhrefi glannau môr y Gogledd, a hwy yn gyrchfannau mor boblogaidd fisoedd yr haf, hawdd a fyddai sicrhau marchnad barod, a chan fod y galwad am ddofednod mor fawr yn nhymor y gwyliau dylasid cadw hynny mewn cof pan yn magu cywion.

acres of land in Wales. To these should be added the poultry of cottages which is a considerable item in the Principality. Almost every cottage throughout the land keeps poultry, and, as a rule, takes great pride in them. Mr. Edward Brown, F.L.S., in an article on the "Capacity of Great Britain in Poultry Production," which appeared in the Journal of the National Poultry Organisation Society for April of last year, calculates that North Wales alone, by taking an average of 3 fowls per acre, would be able to produce eggs and poultry to the value of £1,134,240 per annum. It will be seen, therefore, that there are enormous possibilities in the development of the poultry industry in our midst. The towns and hamlets of North Wales, being favourite pleasure and health resorts, provide a good market for poultry produce, and as the demand for table-poultry during the holiday season must be considerable, it behoves all poultry-keepers to keep this in view during rearing time.

## THE ANGLESEY EGG COLLECTING DEPOT, LIMITED.

BY COLONEL THE HON. R. STAPLETON COTTON.

THAT Anglesey is admirably adapted to the poultry industry in all its branches is beyond dispute. The climate is mild, the soil for the most part medium and light. There are hundreds of acres of sandy land which are practically unused, and which can be had at a very low rental. There are no foxes in the Island and very little vermin of any kind. Corn grown locally is cheap, and there is easy communication with Liverpool by steamer. The best of markets are within easy reach, and in the Season there is a never ceasing stream of visitors to the seaside resorts. To meet the requirements of the latter poultry are actually imported. It would be hard to find a more ideal spot than Anglesey for the profitable conduct of the poultry industry.

Why has it never been taken up in the Island? The answer is plain; because the trade was entirely in the hands of dealers and higglers, and did not pay. During the spring months eggs were practically given away, for the producer was compelled to take any price the dealer fixed, or not sell his goods.

In the spring of 1911, the subject was brought before the Anglesey Industries Association by Mr. Bowen-Roberts, Plas Penrhynn, Dwyran. The result of this was, after consultation with Mr. Edward Brown, F.L.S., and Mr. Nugent Harris, the Secretary of the A.O.S., the formation of the Anglesey Egg Collecting Depot, Limited, at Plas Llanfair Farm, Llanfair, P.G., which was registered under the Provident and Industrial Societies and affiliated to the A.O.S.

Business was started in July, 1911, and branches were opened at Llangefni and Bodorgan. The first month 2,383 eggs were collected. In 1912 further branches were opened at Rhosgoch and Valley. At Llangefni eggs are brought to the spot by producers on market days. At Bodorgan, Rhoscoch, and Valley wholtime collectors are employed, who are paid a commission of 1d. per dozen eggs, with a maximum weekly wage of 35/- . At Llanfair, P.G., eggs are collected twice per week by hired man and cart. Before the Depot started business the greater part of the eggs in the Island were sold in the open market at Llangefni. Comparatively few eggs are now taken there.

Eggs are tested, graded, and packed at Llanfair, P.G., Bodorgan, and Llangefni. From these three depôts all eggs are despatched direct to customers. The first object of the depôt has been from the start to supply the article quoted, i.e., the best quality. Every Friday quotations are sent out with the prices for the following week to the firms with which the depôt deals. That in 18 months trading we have not had one complaint of the quality of our eggs (first grade) speaks for itself. The percentage of bad eggs sent in by producers is very small, while that of dirty, small and stale eggs (seconds or cookers) is not high. Vide appendix.

Girls are employed for grading, testing and packing, and very soon become quick and reliable at their work. On the whole producers have been most loyal to the depôt. It often happens that dealers come and look at the price offered, which is placed outside the Llangefni office every Thurs-



day, they then offer a higher price. But the bulk of the eggs go to the dépôt. Producers have realised that they now have a certain market for an unlimited number of eggs for which they are paid on the spot, and that it pays them better in the long run to sell to the dépôts or collectors.

The secretary, Mr. Osborne Jones, when business was first started, visited several of the large towns in the Midlands with a view to business; several large firms at first refused to take North Wales eggs at any price, saying they were so unreliable, dirty, bad, and small. These firms are all now regular customers. The bulk of the eggs produced in the Island undoubtedly find their way to the dépôts, but the numbers show plainly that the production is not a tithe of what it should be. There is room for an enormous development.

There has been one rather important result following the establishment of the dépôt; local consumers in Autumn and Winter have found it nearly impossible to buy eggs at any price. To minimise the difficulty we last summer recommended large consumers to put down eggs in waterglass, when there was a glut in the market. We offered to supply tested eggs for the purpose at a cheap rate and 10,000 eggs were sold. The result has been most satisfactory, and a largely increased sale is expected this year. We have had little or no difficulty in marketing our first quality eggs, but we have the same experience as others that it is not possible to supply the Autumn and Winter demand. During that time all our customers have to be content with half-orders or less.

The quality and condition of eggs has vastly improved since we first commenced work; producers have realised the importance of placing their eggs on the market clean and fresh.

The attached statistics may be of interest. In starting business here there were many difficulties to overcome, and the cost of doing so was very considerable. The trade being entirely in the hands of the dealers, it was necessary first to clear them out of the way. We found the surest way was for us to fix the weekly price of eggs ourselves. This was done with great advantage to the producers. It was the custom in the Island with many to take their eggs to grocer's shops and exchange for groceries. That custom will gradually die out as people become more independent. Again, many of the smallholders take butter and eggs to Llangefni. The dealers refuse to buy the butter unless the eggs are sold with it. During the season high prices are given by visitors for eggs. That we realize is an advantage to the producers and in no way do we try to divert this supply.

What the producers especially appreciate is:—1st, ready money; 2nd, a certain market; 3rd, that the eggs are collected at their doors; 4th, that every egg is paid for without any haggling or deductions.

Very great interest is being taken in the approaching visit of the Egg and Poultry Demonstration Train. That it will give a great impetus to the

industry is certain. Anglesey ladies have contributed willingly and liberally towards the expenses of the train, and the most pleasing feature is that a large amount was given by farmers' wives, daughters, and sisters.

Of the live and dead poultry industry it is sufficient to say that it is almost entirely in the hands of dealers who fix the prices, and so long as that continues it cannot thrive. However, several enterprising persons have lately started poultry farms with every prospect of success; may the best or luck be theirs.

#### APPENDIX.

Number of eggs from July 1st to December 31st, 1911, 95,502.

Number of eggs from January 1st to December 31st, 1912, 580,874.

Number of eggs in December, 1911	...	15,960
" " " 1912	...	25,290
" " January, 1912	...	33,720
" " " 1913	...	48,458
" " February, 1912	...	37,200
" " " 1913	...	49,466

Analysis of eggs for week ending March, 15, 1913.

1st grade.	2nd grade.	Broken.	Bad.	Total.
18,032	2,534	71	10	20,647

#### Hens that hatch Fish.

As is generally known, a big quantity of fish spawn is annually lost. To avoid this, fish rearers in China carefully collect spawn from the surface of the water, and when they have secured a sufficient quantity, they take a number of hen's eggs, the contents of which have been carefully emptied through a small aperture, and refill the shells with the spawn. The holes are then filled up, and the eggs put under broody hens. The hens are allowed to incubate the eggs for a certain number of days, when the eggs are again broken and their contents put into water that has been previously warmed by the sun. In a very short space of time the spawn hatches, and the young fry are then kept in pure fresh water until they attain a sufficient size to be put into the ponds containing older fish. The Chinese have long understood all the intricacies of incubation, and were amongst the first to use incubators for the hatching of hen eggs, long before such machines were made in this country. At one time a considerable business was done in this style of spawn hatching.—*Scotsman*.

#### Rhodesian Regulations.

All poultry imported by rail into Southern Rhodesia has to be inspected at the frontier and any showing symptoms of disease will be detained or destroyed. This is due to the fact that several cases have occurred where infection has been introduced from the South and Portuguese territory.



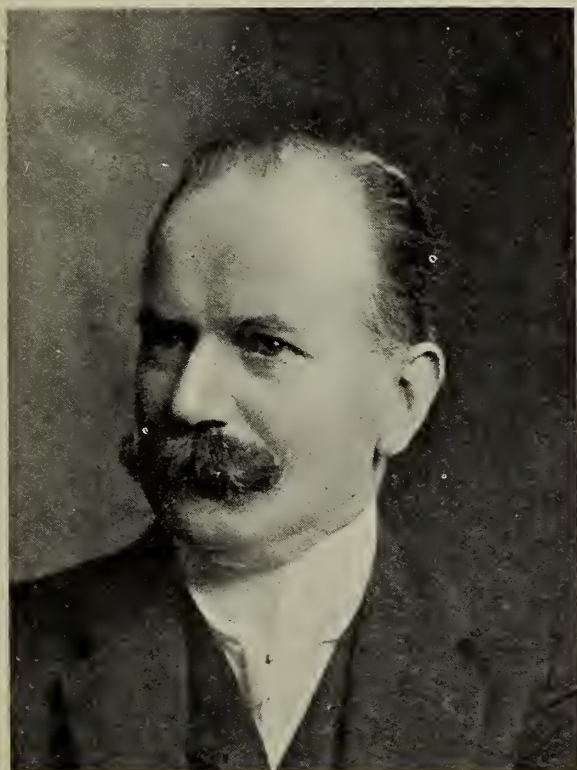
## THE "CONDUCTORS" OF THE EGG TRAIN.

### Mr. J. Nugent Harris.

Mr. Nugent Harris was born in the town of Ennis, Co. Clare, Ireland, in 1862. He qualified as a chemist, and eventually took up dairying as a branch of his profession. He visited Australia, Sweden, Finland, and Denmark, where he studied the agricultural industry of the respective countries, and became specially interested in agricultural co-operation by reason of what came under his notice in Denmark, Sweden and Finland. He joined the Agricultural Organisation Society in July, 1901, (the year of its formation) as Dairy Expert, and became Secretary of that body in October of the same year.

As the result of the twelve years work of the A.O.S. upwards of 480 agricultural co-operative societies have now been formed in England and Wales with a membership of not far short of 50,000, and a business turn-over which will approximate to about £2,000,000 at the end of this year.

A specially interesting feature of the propaganda work of the A.O.S. is the rapidly growing interest in the Egg and Poultry Industry that has been aroused in many of the co-operative trading societies which have been organised. There is now in the English Agricultural Co-operative Movement

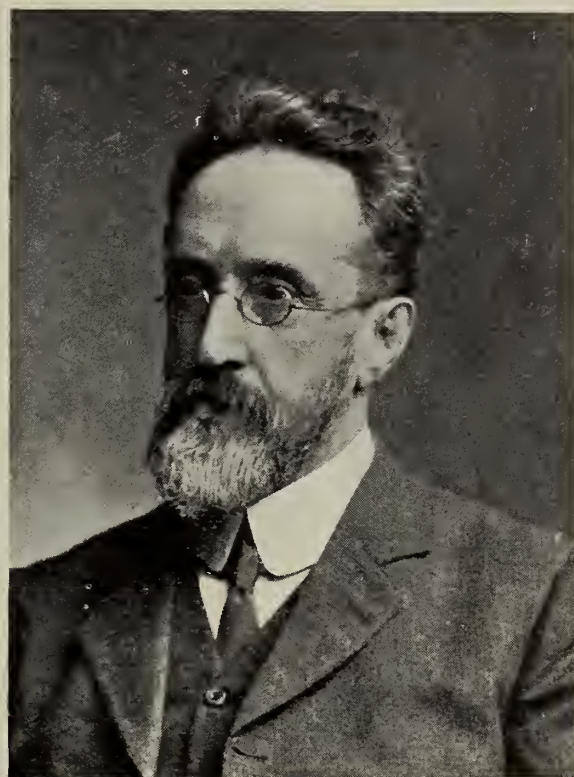


**Mr. Nugent Harris,**  
**Secretary of the A.O.S.**

the largest Co-operative Egg Society in the United Kingdom—that of Framlingham, which last year disposed of upwards of 5,000,000 eggs.

### Lord Boston.

Lord Boston is the president of the North Wales branch of the Agricultural Organisation Society. He was educated at Christchurch, Oxford, and was Lord-in-waiting to Her Majesty Queen Victoria



**Mr. Edward Brown,**  
**The Director of the Egg Train.**

during 1885 and 1886. He is a large land-owner in Anglesey, and is keenly interested in the development of rural industries. He is chairman of the Anglesea Industries Association and is especially interested in agricultural matters and in entomology.

### Lieut. Col. The Hon. R. S. Cotton.

Lieut. Col. Cotton served in the army from 1868 to 1889. He has been closely connected with agriculture and horticulture all his life. For many years he was a land agent in the midlands, finally settling down at Llanfair, in Anglesey. He was for some time chief promoter of the Agricultural Organisation Society in Anglesey in connexion with the egg society, and is now on the Committee of the North Wales branch of the A.O.S. Col. Cotton is largely responsible for some remarkable developments in Anglesey, other than the Egg and Poultry Society named above, such as bulb growing.

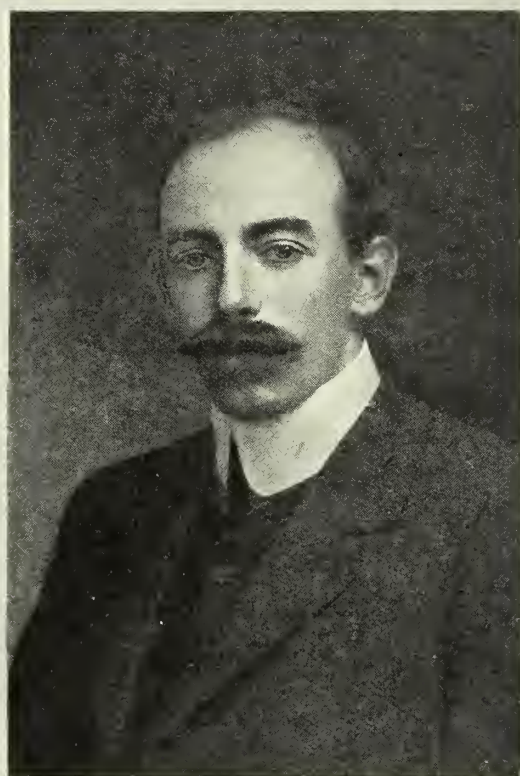
### Mr. David Davies, M.P., M.F.H.

Mr. Davies is the only son of the late Mr. Edward Davies of Plas Dinam, Llandinam, Co. Montgomery. He is a Fellow of the Royal Geographical Society. Vice-President University College of Wales;





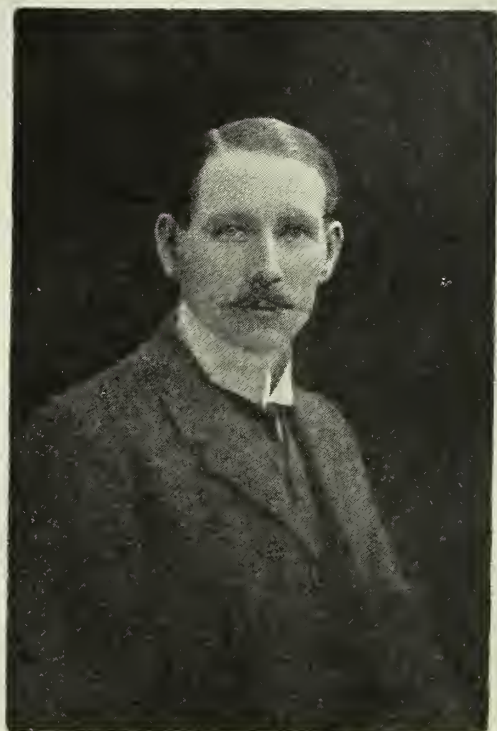
**Mr. R. A. Yerburch, M.P.**



**Mr. David Davies, M.P., M.F.H.**



**Lord Boston.**



**Mr. Walter Williams.**

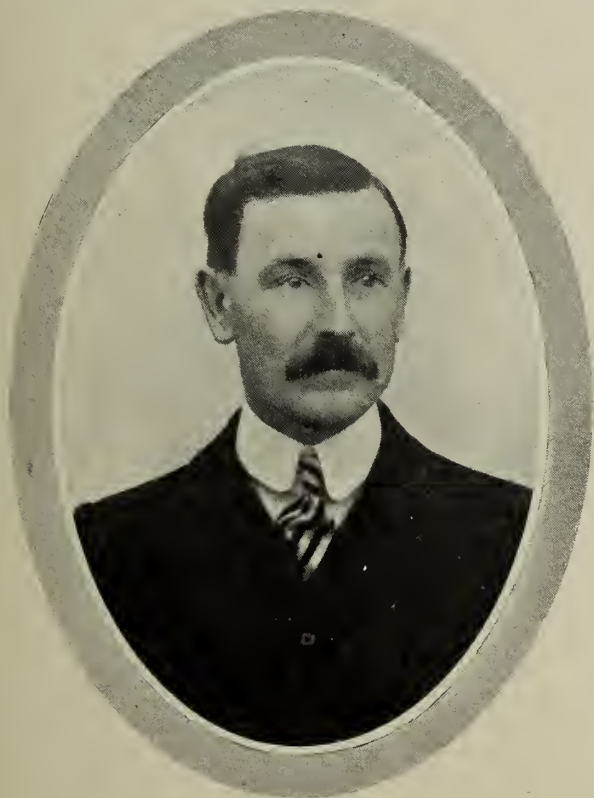


Member of Councils of University College of North Wales (Bangor), University College of South Wales (Cardiff); and Normal College (Bangor); and a Member of Court of Governors of University College of Wales. He has travelled extensively and is much interested in sport, including hunting. He has private packs of fox hounds and beagles at Llandinam.

Mr. Davies is a very keen Agriculturist, and is interested in various movements for the improvement of agricultural and rural life generally. He is an Ex-President and Member of the Council of the Welsh National Agricultural Society; Vice-President of the Agricultural Organisation Society, and elected Member of the Executive Council of the North Wales Section of the Agricultural Organisation Society; Member of the recently formed Board of Agriculture for Wales; and Member of the Advisory Committee of Agricultural Science (Board of Agriculture and Fisheries).

#### Mr. David Thomas.

For some years Mr. David Thomas studied at the University College of Wales, Aberystwyth, where he gained with distinction, the diploma in agriculture and the Dairy Teachers' certificate. After a temporary appointment as lecturer under the Bangor University College he became manager of the Lampeter Co-operative Dairy Society Ltd. In 1907 he was appointed manager of the butter



Mr. David Thomas.

and egg Department of the Clynderwen Co-operative Society, a post which he held for 4 years. In April 1910 he was demonstrator on the South Wales Egg Train, and since then has been engaged by the National Poultry Organisation Society in

giving instruction in egg-testing, grading, etc., in connexion with the starting of egg and poultry societies. He is vice-president of the Aberystwyth College Agricultural Society and of the Emllyn Co-operative Society, as well as secretary of the Cardiganshire Farmers' Union.

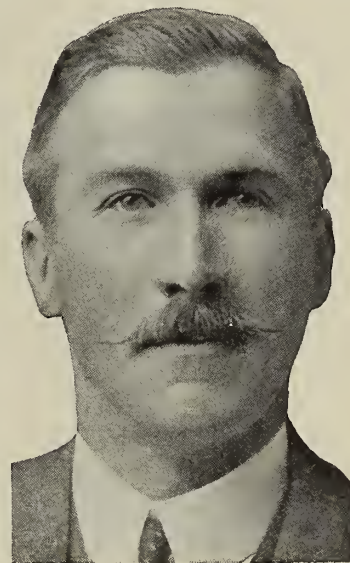
#### Mr. Walter Williams.

Mr. Walter Williams has been connected with the Agricultural Co-operative movement since its commencement. The son of a Carnarvonshire farmer, in 1902 he started work as organiser under Mr. Brigstocke, who was then representative of the Agricultural Organisation Society in Wales. He proceeded in the same year to Ireland with a Welsh deputation to study the movement on the spot. The following year he was in Denmark, and the results of both visits he published in Welsh.

In conjunction with Mr. Edward Brown he organised locally the South Wales demonstration train and is now with him on the one touring North Wales. He is at present secretary of the North Wales branch of the A. O. S., besides being chief organiser for the whole of Wales.

#### Mr. Verney Carter.

Mr. Verney Carter has been for the past nine years organising secretary to the National Poultry Organisation Society, in which capacity he has had charge of the marketing section, and has worked arduously in placing home produce in the position which it now occupies. Prior to 1904 he had charge of the Stoke Ferry Depot, which he conducted most successfully. Mr. Carter, who is a Norfolk man, was for several years in Egypt, and is a member of the London Egg Exchange. He is at present engaged in doing valuable work for the British Poultry Federation.



Mr. Verney Carter.

#### Poultry in Vancouver.

There are sections of this valley highly suitable to poultry raising. There is a large area of good sandy land, with desirable slope, near the water front. Those who have entered into this enterprise have made good profit. Poultry and eggs have a ready market, and the demand for such in the local market is far from being supplied. There is ample room for further enterprise in this lucrative business.



## EDUCATIONAL AUTHORITIES AND THE POULTRY INDUSTRY.

BY "STATISTICIAN."

WE hear much of what is going to be done in respect to rural education. Money has been granted from the Development Fund. Announcements are being made as to this, that and the other project. Thus we are living in hopes. How far poultry is going to receive adequate attention remains to be proved. With one or two exceptions the signs are not very promising. Prejudice against and, to put it strongly, hatred of poultry-keeping, on the part of many of those most influential in connexion with county education committees and agricultural colleges, are being used against our industry, just as the influence of county authorities has hindered the development of small holdings.

Unless and until the Board of Agriculture compels educational authorities to adopt schemes which are in conformity with local needs and opportunities, so long, in many counties, will every branch save poultry keeping receive attention. The Board has by means of funds available, the power to alter the whole aspect of affairs. Will it do so? is the question.

The publication by the Board of Agriculture and Fisheries of the "Annual Report on the distribution of grants for agricultural education and research in the year 1911-12," and "a summary of the agricultural instruction provided by County Councils in 1910-11," throws considerable light on the shortcomings of Agricultural Colleges and County Educational Committees. I have previously called attention to these annual reports (1), and regret to say that practically nothing has been done, at any rate up to the periods referred to in the report under review. There is, however, one point which needs to be emphasised, namely, that up to 1908 tables were given showing the expenditure of County Councils on the various branches of instruction and the amounts allocated from the residue grant. When the supervision of such teaching was transferred to the Board of Education, these suggestive figures were omitted, for which no explanation has ever been given. Perhaps they told too much, and showed how the trust had been abused. Now that the Board of Agriculture and Fisheries has resumed control of such county teaching, I had hoped we should once more have been placed in possession of records that the public has a right

to see. It is, therefore, disappointing that such have not been again provided. From other evidence it is certain that all I have previously said would have been abundantly justified. It may be that those responsible for such neglect of the poultry industry desire to keep this information to themselves. It is certainly to be hoped that this will not occur again. As so much money is provided from natural funds the allocation should be stated to the fullest extent.

### AGRICULTURAL COLLEGES.

Fifteen universities and colleges at which instruction in poultry-keeping could be given are recorded as receiving grants from the Board of Agriculture. Of these, however, two might be left out of consideration, namely the Universities of Cambridge and Oxford, as the nature of their work is scarcely suitable to include teaching this branch, except as regards the general principles of live stock breeding. Therefore, thirteen institutions remain, at all of which save one, considering equally the districts which they serve, and the immediate opportunities and requirements, it is reasonable to expect that there would be one or more whole time poultry lecturers and instructors engaged, available, of course, for teaching in the contributory counties. Let us see what are the facts of the case.

Only four of the Colleges in 1911-12 are recorded as having a whole time poultry lecturer, and at each of these the greater part of the work done is in country teaching.

Four more provide instruction in the subject, but the teacher covers other subjects, and therefore, poultry-keeping is subsidiary. That can never be satisfactory, and generally means that the teaching is inadequate and sometimes superficial. Those embraced in this class are: Royal Agricultural College, Cirencester. Cheshire Agricultural College, Holmes Chapel. Horticultural College, Swanley. South Eastern Agricultural College, Wye.

So far as the other institutions of a University or collegiate character are concerned, those which do nothing in respect to poultry, as indicated by the report published, may be placed in a

#### Black List.

University College of Wales, Aberystwyth.  
University College of North Wales, Bangor.  
Agricultural Department, University of Cambridge.

(1) See Vol. II., p. 6, October, 1909; Vol. II., p. 575, August, 1910; Vol. III., p. 108, December, 1910.



Armstrong College, Newcastle-on-Tyne.  
 Agricultural Department, University of  
 Oxford.  
 University College, Reading.  
 Harris Institute, Preston.

Possibly at one or more of these a few lectures are given occasionally, but there appears to be no systematic teaching of the subject.

As to practical instruction, demonstration and experimental work in connexion with poultry, a few of the institutions named have poultry plants on their farms, notably Leeds, Harper Adams, Midland, Uckfield, Cirencester, Holmes Chapel, and Cambridge, but on a totally inadequate scale. The Lancashire County Council Farm at Hutton, near Preston, is the best in this respect, and other smaller teaching centres of a like character are at Basing (Hampshire), Newton Rigg (Cumberland), and Ridgmont (Beds). No one, however, has even attempted to treat the question in a moderately satisfactory manner, either as to equipment or staff. As an example may be mentioned the Leeds University Farm at Garforth, maintained by the three Ridings of the premier county, wherein the interest in this branch is very great and the opportunities enormous. A conservative estimate is that the annual consumption of eggs and poultry is £1,000,000 greater than the production. Yet the poultry section of the farm, apart from portable houses on the fields, does not cover much more than an acre.

The entire poultry plants for teaching, demonstration and experimental work on collegiate farms in England and Wales does not exceed 15 acres in extent. As a contrast the land allocated to the poultry department at Cornell University, in the State of New York, exceeds sixty-five acres.

#### COUNTY TEACHING.

When we came to examine the report in respect to the poultry work of county education committees in the year 1910-11, the facts available are most meagre, especially in those areas where little has been done. Those who have something to show do not fear to state the facts. I hope this means that the others are ashamed of themselves. Even the best have nothing to be proud of. Here are a few examples, saving the counties from appearing in the Black List given below, but merely by the skin of their teeth.

Bucks	...	9 lectures.
Durham	...	5 centres.
Leicestershire		3 lectures.
Salop	...	8 centres.
Westmorland		10 lectures.
East Riding, Yorks		5 lectures.

others of this rank merely mention that some lectures were given. Even the best are poor. It is all a bad business.

There is not one county in England and Wales that is giving to poultry instruction a reasonable share of attention as compared with other branches of agriculture, inadequate though the latter may be. The majority have gone back instead of forward.

Although little credit is due to some counties which escape the Black List given below, they manage to do so, and I cannot include them. Still we must take the records as published. The following list gives the names of counties which appear to have given no poultry teaching whatever in 1910-11:

#### Black List.

##### England—

Berkshire  
 Cambridgeshire  
 Cornwall  
 Devon  
 Dorset  
 Huntingdon  
 Isle of Ely.  
 Isle of Wight  
 Holland (Lincolnshire)  
 Kesteven (Lincolnshire)  
 Middlesex  
 Northumberland  
 Oxon  
 Rutland  
 Surrey  
 West Sussex.

##### Wales—

Anglesey  
 Brecon  
 Cardigan  
 Carmarthen  
 Carnarvon  
 Merioneth  
 Montgomery  
 Pembroke  
 Radnor.

Thus sixteen counties in England, with a total area of cultivated land amounting to about six and a half million acres, or 25 per cent. of that in the entire country; and nine counties in Wales, with a total area of cultivated land amounting to upwards of two million, one hundred thousand acres, or 76 per cent. of that in the entire country, had no teaching provided in this important branch of food production.

Need I say more? The facts here given, extracted from an official publication, speak for themselves. They reveal a condition of affairs that is discreditable to all concerned.



# THE SEVEN PHASES OF THE POULTRY INDUSTRY.

BY WILFRID H. G. EWART.

## IV.—THE ORDINARY POULTRY-KEEPER.

**B**Y the "ordinary poultry-keeper" is meant all those legions throughout the country who keep fowls, not entirely for profit, nor yet entirely for pleasure, nor on a large scale, but on a descending scale from the man who keeps fifty or sixty laying hens in a grass paddock, to the man who adopts three pet fowls in a pen behind his tenement. Three distinct classes come under the heading of the "ordinary poultry-keeper" (1) the cottager, (2) the amateur, and (3) the backyarder. And with these we will deal separately.

### THE COTTAGER.

An extremely important person. Since fear of

of development as in the case of the cottager. It is well known that relatively the small poultry-keeper should be more successful than the large one because he is able to devote greater attention to his stock. This is in fact true of farmers and cottagers. It is also the case that the former can only fully succeed through the latter.

### COTTAGER AND FARMER.

If this co-operative system were adopted the one hen per acre standard would speedily be attained and probably exceeded. What I should like to see is every attached cottage occupied by a labourer and having pasture land adjacent, supporting at least two hundred birds per annum. In many



**A BUCKINGHAMSHIRE DUCK FATTENING PEN.**

[Copyright.]

Duck fattening offers great opportunities to the progressive modern poultry-keeper.

swine fever has divorced so many cottagers from their homely swine, and since local regulations have added even further to the dangers of pig-keeping, poultry-culture has come more and more into fashion. It is highly desirable that this should be so. To-day the farmer is our main standby for eggs and table-poultry; a few years hence and the cottager will possibly have taken his place. I do not believe we shall ever educate our farmers in fowl lore beyond a certain and somewhat elementary stage nor, it seems to me, are there the same possibilities

cases the number should be even greater than this, for on some estates, especially in the Midlands, grass land, *ad. lib.*, surrounds the cottages, of course in the ownership of the tenant-farmer. In spring, therefore, we should expect to find a large selected head of pure-bred stock upon the farmsteads; around each of the attached cottages forty or fifty young birds not more than two months old. From February to May, the cottager's job will be to receive eggs from headquarters and turn them into well-grown, active chickens when they leave the



hen. They will then go back to the farm, and in due course be drafted apart according as they are cockerels or pullets. Probably by haytime the agent will have cleared off the bulk of his birds and then his land will rest through the busy autumn days till October, when twenty or thirty pullets will be sent across to him. What, you ask, can he hope to get out of this? Well, there should in the first place be a fixed rate of payment, such for instance as twopence for every chicken reared. I mention twopence quite tentatively because in my own case I only paid a penny each, and for eggs produced a penny per dozen. These rates, however, were somewhat exceptionally low for various reasons. Food, coops, houses, etc., are supplied by the farmer. The work of rearing the chickens is largely left in the hands of the wife and children, and of pensioners too old to work on the land, but providing such people are reliable, few difficulties stand in the way.

#### CONCERNING DUCKS.

Exceedingly high laying averages are obtained by some villagers from their stock, and indeed, all considered, I should say that the cottager is among the most enlightened of industrial poultry-keepers. Chicken rearing is seldom attempted, the usual practice being to purchase a half-dozen or so pullets at the age of three months from some neighbouring farmer. At the same time, curiously enough, a cock or cockerel is nearly always present and here we see a quaint peculiarity of the peasant nature. The bird, you are told, is kept for company's sake.

To pass on to the ducks, I feel that there must be large scope for development here. On many farms there are waterfowl, the eggs of which the farmer would be quite content to sell for twopence each fairly early in the season. Having hatched these, the cottage-garden is found to be well suited for rearing the ducklings for table purposes. There is not too much room for exercise, while the kind of scraps which every housewife has to dispose of are extremely nutritious and fattening mixed with barley-meal or middlings. No finely balanced diet is needed, only regularity of feeding, cleanliness, and ordinary care which the cottager's wife is entirely in a position to give. At eight to ten weeks the ducklings are ripe for killing, when eight or nine shillings a couple should be obtained for them. There seems to be no valid reason why the flourishing condition of the Aylesbury district should not be reproduced elsewhere on a smaller scale, and as good prices secured in private trade as obtain in the London market. The difficulty with regard to obtaining sufficient eggs early, would probably overcome itself as soon as farmers found a steady demand for them.

#### A FAVOURED COTTAGER.

Of course, some cottagers are exceptionally favoured by fortune, and such is the extremely prosperous labouring man whose flock of Aylesburys

is seen in the illustrations. Would there were more of these comfortable scenes in rural England! Here the foot of his garden is bounded by running water—an ideal spot for producing fertile eggs which are sold for the most part to neighbouring farmers and small-holders, though here it should be stated that water is not in the least necessary for breeding-stock. Note the excellent runs and sheds in the background with immediate access to the stream. This fortunate duck-keeper also keeps a number of fowls.

#### THE AMATEUR.

Probably we do not all realise how large a part the amateur pure and simple plays in the poultry business. Indeed our industry is unique in the sense that it depends to a considerable extent upon the casual efforts of the hobbyist as well as upon professional support. By the amateur, I mean not necessarily the novice or the incompetent element, but rather the kind of person I find in every English village. The squire, for instance, the parson, the doctor, and indeed practically everybody of independent means has a poultry-run just for the purpose of supplying home-grown chickens for luncheon or dinner once or twice a week, and genuine new-laid eggs for breakfast. In the suburbs, men of business with capacious villagardens go in for the same hobby with the same ideal, and then there is throughout the country a large proportion of well-to-do tradesmen and ladies of country tastes who take an interest in fowls. Indeed, it should be said that this aspect of the industry is almost wholly in possession of the fair sex.

The great difficulty about amateur poultry-keeping is that it is almost unvaryingly conventional. True the pure breed has come generally into fashion of late years, mainly because of its æsthetic quality in the scheme of a garden or estate, but there is no particular ambition to extract from it either the utmost output of eggs or of flesh. People ask that inevitable question, "Does the poultry pay?" in an airy conversational manner without perhaps any very clear idea as to whether they mean "paying its way" or paying in the profitable commercial sense. On this account, I think, the ordinary poultry-yard is too often sterile and unproductive, for nearly all its output is consumed, whereas under enterprising management and proper economy, there should be a good surplus towards the requirements of the community in general. "Well, we don't try to make money out of the poultry, we only want it to pay its way and keep the house supplied with eggs and chickens" is a very usual rejoinder to the above query, and it shows a lethargic spirit. A thing that is worth doing at all is worth doing well, and there is no reason why the majority of amateurs should not take up line-breeding and trap-nesting, adopt up-to-date methods of marketing their produce, and generally place things on a business basis with a view to showing a profit at the end of the year.



Because you are an amateur it does not in the least follow that you need be amateurish.

#### THE BACKYARDER.

The backyarder has shown a notable increase in all large towns, and where a generation ago nobody dreamt of seeing anything but a brick wall and a grimy yard, to-day we find a poultry-run and a pigeon-cote. Interesting as this is,—and admirable too, as showing the remarkable ingenuity and tenacity with which Englishmen cling to the lightening influence of birds and animals about their homes—still the main significance of the backyard movement lies in two directions. On

#### REARING IN THE NATURAL WAY.

TO a large extent the early treatment and management of chickens determines their future value. Neglect at the outset will have well-nigh fatal results so far as ultimate profit is concerned.

The first important point for consideration is: What is the most suitable place upon which to rear chickens? The points that ought to govern the choice of the situation for the work are what amount of natural shelter in the form of shrubs, bushes, etc., is available, and if these are not available, does the position lend itself readily to the



**THE WORKING WIFE'S HOBBY.**

Feeding fowls in a suburban run.

[Copyright.]

the one hand there is the elevating prospect that by keeping three or four hens, our working men may become somewhat independent of the grocer and the foreigner, while their anæmic wives and children may benefit to an untold extent by that vitalising product, "the new-laid egg." On the other hand—and I make no apology for putting the matter on these high grounds—there is the immense social asset of a clean recreative hobby to attract the working-man to his home. For consider: Is not most of the crime, destitution, and misery in all our great cities due, through the public house, to the cheerless home and the emptiness of its environs? If that is so, then backyard poultry-keeping has a definite mission towards a national regeneration.

erection of temporary shelter? The quality of the soil is also important, and while the poultry-keeper cannot alter its quality, he can do much to overcome difficulties which at first sight appear to be insurmountable. It is an absolute necessity that the immediate plot upon which the chickens live shall be dry, not necessarily sandy, nor very light, but it must be dry. The result of rearing on a damp, marshy place is that the growth of the chickens is very considerably retarded. Not only so, but the damp and cold arising therefrom have the effect of inciting attacks of diarrhoea, while, in addition to this very serious ailment of chickenhood, they very often go wrong in the legs. It is no uncommon sight to see chickens that run on a damp soil with their toes caked with mud. This accumulates and



hardens to the solidity of a stone, and it is not infrequently the cause of permanent lameness, which is not only detrimental from the utility standpoint, but very objectionable from a point of beauty. A few deformed chickens quite spoil the appearance of an entire batch, since these faulty specimens seem in an unaccountable manner to be more prominent than any of their more perfect brethren. It is, however, true that chickens may be affected in this way upon any kind of soil, but it is more liable to happen on a damp than on a dry place, since under the latter conditions it is caused by inattention to cleanliness.

It is difficult, if not impossible, to get a place that is perfect in every detail; at the same time, by exercising a little ingenuity and method a most unlikely place may be transformed into quite a suitable one. If the ground is not naturally dry, some kind of drainage should be adopted. Of course, whatever be the ingenuity of the owner, no amount of skill can ever convert a really bad place into a good one, but much may be done to improve it. In addition to surface drainage, the highest part of the land should be chosen, so that the water runs away from the spot where the chickens mostly gather. It is a very great advantage, when the rearing ground is so situated, for the chickens to have freedom and access to ground that can be dug up from time to time. This gives a wonderful fillip to their growth, since they are kept busily employed in scratching, and they get from the freshly-spaded earth much valuable feeding matter. In selecting the position the importance of adequate shelter must not be neglected. This is an extremely important matter, and it is seldom recognised that shelter is just as necessary for the feathered members of a farmer's stock as it is for any other live stock. It is not meant to imply that they require to be reared entirely under cover. We are by no means in favour of this system, which has the effect of making them extremely tender, and when the time arrives, which arrive it must, for their removal, they are not equipped with the necessary strength to withstand severe weather, which they are sure to have before they are safely "through the wood."

There are other extremists who say that they like to follow nature and bring them up in a hardier manner. Very frequently this cry of following nature is merely an excuse for neglect, both so far as chickens and adult stock are concerned. It is all very well to say when the young ones have no shelter and the old ones roost in the trees that this more nearly resembles the conditions prevailing when in their wild state. It would be quite as reasonable not to feed the birds, since in their natural state they were accustomed to find their own food. There is a medium in all things. Allow the chickens liberty to run out in the open at any time, but have plenty of shelter and a place where warmth may be had. They will soon find out the warm spot and run to it when they require brooding. Chickens will never thrive to the same extent unless they are kept warm, for we find the

growth of all stock is very considerably retarded unless they are kept warm. When the chickens mope about with shoulders up and feathers ruffled, it may be taken as a certain sign that they require more heat.

The piece of land that is to be used for the chickens should be in readiness well in advance, and it should be dry and well sheltered. The coops should be so placed that all the benefit of the shelter, whether natural or artificial, is secured. The coop should be sufficiently roomy to allow the hen freedom of movement. An adjustable shutter in front is a distinct improvement, since it affords protection during the night and shade from the sun in summer. One very often sees coops facing in any direction except the south, and, being provided with no sort of shutter, the wind and rain beat directly upon the inmates. In the very early months of hatching it is an excellent plan to place the coops under a wooden shed, where the floor is strewn with dry earth to the depth of two or three inches. On the top of this some sort of litter, such as chopped straw, chaff, or anything of a similar nature, should be strewn, among which the chickens can find plenty of employment. If the place at the poultry-keeper's disposal is sufficiently large to allow of the daily moving of the coops, and the earth is dry, it is inadvisable to have a wooden floor. If, however, the soil is heavy and cold, a wooden floor should, by all means, be provided; but it should not be part of the structure, but merely a board a few inches bigger than the bottom of the coop. When the coop is placed thereon, both hen and chickens are protected from the damp earth. This, of course, is important, but even more important still is that it greatly simplifies the thorough cleaning of the coop. All that is necessary is the daily removal of the coop from the floor, when the latter may be scraped or treated in any way necessary to secure perfect cleanliness. Many are the ailments incidental to chickenhood that owe their beginning to inattention to these matters. It is perfectly true that the hatching season is an extremely busy time for the poultry-keeper, and with his many and varied duties he may overlook the supreme importance of this matter, the results of which are apparent in many directions. Dirt is bad for fowls at every stage in their life, but never is it so serious a menace to their well-being as it is during their young days. It considerably checks their growth and undermines their constitution, thus rendering them ready victims to disease, which otherwise they might escape. Dirt and insanitary conditions are responsible, in many cases, for the presence of both internal and external parasites. When young stock are doing badly worms are very often unsuspected, and some other cause is given for their wretched condition, but it is due to worms that they are thriving so unsatisfactorily. Much of this trouble may be obviated if care be taken to keep the ground, coops, and all other appliances scrupulously clean. In close proximity to the coop some fine ashes or dust should be placed,



so that both hen and chickens may enjoy a dust bath, one of the surest ways of keeping down parasitic life.

The frequent moving of the chickens has a two-fold benefit, one of which we have already mentioned—namely, cleanliness and the keeping of the land sweet. The other reason is equally important, and that is, the benefit derived by the birds through having a continual change of surroundings. There is no greater aid to growth and condition than that secured by change of environment. This is seen in so many directions. After a rather lengthy stay on

one place the chickens may be observed to have lost much of their former energy, and for the next two or three weeks their growth is not so pronounced. The reason for this lethargy and check in growth simply means that the birds want a change. This does not mean that the land is tainted, or any such deadly reason necessitating the change, but merely that the tedium and the familiarity of their surroundings have cramped their energy. A change of position very soon restores their vigour, which is so closely allied to growth and condition.

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## EUROPEAN MILK-CHICKENS.

THE tendency has been evident in Europe for centuries towards the development of the flesh properties of our poultry. In fact it would almost appear as if egg production, except for reproductive purposes, had been a secondary question until recent times, due to the great increase of industrial and commercial communities within the last seventy years. We may assume that eggs have always been eaten, older cookery books proving such to be the case, but not nearly to the extent as now, and that formerly the meat quality of fowls was the chief desideratum. That is gathered from old Gervasse Markham, who wrote just 300 years ago, and subsequent authors, from whose works it is evident that breeding for egg production was not thought of. Fowls have always been relatively of greater value than eggs, at least until recent times. Many there are who can remember seeing eggs offered retail at 4d. per dozen.

As a rule the breeds which are found on the Continent of Europe are highly specialised. Until the advent of Asiatic races we had no General Purpose type of fowl. All were mainly valued either for their flesh or eggs, the former more than the latter. That is not the case now. Excepting the Italian races, that is, the Leghorns, even the other types of laying fowls were more or less useful for meat properties.

When and where and how what are termed "Milk Chickens" came into use we have never been able to discover. That they have been eaten in France and Belgium for a very long period appears to be unquestionable. As a marketable commodity we can remember their introduction over here. They were given a measure of popularity by a well known nobleman, who is still with us. Enquiries in Paris and Brussels alike elicited the statement that they had always had them. What that means it is difficult to surmise. Both countries of which these are the capitals have been famous for their love of good poultry, as for their high class cookery and living. Where the Englishman preferred big joint and lumps of meat the French and Belgians was in favour of made dishes, in which the flesh used was only a small part.

In France the production of *petits poussins*, as they are called, is a business, in the main, largely met with in the Seine-et-Oise department for the Paris markets, and is in the hands of small occupiers, each of whom raises a few each year, or hatches more chickens than they desire to grow to a larger size, killing off a portion in accordance with market demands. Formerly the Houdan was chiefly preferred for that purpose. In speaking of this breed we have to keep in mind the fact that the French Houdan differs from the English, in that it is slighter in body, has a smaller crest, and is more rapid in growth, not having been bred on exhibition lines. It has the supreme virtue in European eyes of white flesh and skin, and pinkish white legs and feet. But the day of this breed has largely passed, and it is very little in evidence on the farms where once it was ubiquitous. The reasons for this change are that it has worked out to a very large extent, due to continuance of breeding generation after generation under the same conditions, and to the loss of vigour resultant therefrom.

The place has been almost entirely taken by the Faverolle, a product of the same district, evolved by a mixture of Houdan, Dorking and Light Brahma, as a result of which it has that constitutional vigour which is all important. It is a massive, short legged bird, quiet in disposition, just one that would tend to flesh production, yet withal very hardy. The beard which ornaments its jaws is inherited from the Houdan, and merely gives it distinctiveness. The flesh, skin, legs and feet are white. In Europe shortness of leg is preferred in meat breeds of poultry, as it is thought that greater length means activity of habit which is not desired. In France the colour of plumage is very mixed and uncertain. In fact, that is thought to be of minor importance so long as the general type is correct. The great point of the Faverolles that it is a rapid grower, making for flesh all the time. It meets the need for *petits poussins* and large birds alike, but when fully grown does not bear comparison with some of the other French races. Here again there is no specialisation save in the hatching at an earlier period than



would ordinarily be the case. If the demand arises and the peasants have enough they each dispose of a few when six to eight weeks old, weighing 8 to 12 ounces each. Should the price not be tempting they are kept until a later stage.

Under these conditions the customary plan is to feed all the chickens up to a given stage in exactly the same manner, and for about a fortnight prior to killing, those selected are separated and fed off. It should be remembered that the French pay special attention to the feeding of chickens, only giving whatever will conduce to fineness of flesh. What is called *pâté*, that is meal made into a crumbly paste, is preferred, and this is what we should regard as somewhat rich. Care in feeding seems to prevent any ill effects. For the final feeding, oatmeal, buckwheat meal, sometimes a little barley meal and cooked rice are given, mixed with *petit lait* (skim milk) which is generally soured. For every hundred birds it is customary to add about half a pound of pure fat, mutton for preference, per diem. A little grain, wheat or buckwheat, is scattered among cut chaff, so as to induce exercise and help digestion. An abundance of grit and green stuff is regarded as essential. This feeding, combined with limitation of activity, brings the body into plump condition. The point is to catch the birds when at their best, and before the chicken feathers are cast.

In Belgium formerly nearly all the *poulets de lait*, as they are called there, were Campines or Braekels, and thus most nearly approximated to the production of squad broilers in America, in that they are not bred for the purpose but are the cockerels chosen from the general flock. In the breeds named the sex can be distinguished by the time the birds are five weeks old. It is evident that it is a great advantage to get rid of the precocious cockerels at this stage, more especially as there is a profitable market for them. A couple of weeks feeding similar to that already referred to as adopted in France, brings them into plump condition, though in many instances even that seems to be scarcely necessary, for they are naturally fleshly at that time. These milk chickens usually weigh about 7 or 8 ounces, as the race is a small one in size. We can personally vouch for the delicacy and fine flavour of the birds, which carry a fair amount of flesh considering the size.

Within recent years, however, larger *poulets de lait* have been appearing on the Belgian markets, more like the French in respect to size. They are

of the Malines breed. The tendency is for these to displace the Campines which appear small in contrast. They are very good.

A few years ago an attempt was made to produce these birds in a wholesale fashion. An establishment was set up a few miles out of Brussels with the object of hatching and rearing large numbers. The chicks were reared on shelf brooders, but the enterprise was a failure and had to be abandoned. It is remarkable how many attempts have been made in this direction, and recent visits to Germany, where I first saw the system in operation more than twenty years ago, revealed the fact that there is still a belief in it, although practice has never yet afforded complete justification. The trouble is in keeping the birds



A Cottager's Ducks at a "watersplash."

[Copyright.

(See page 355).

alive, as the unnatural and highly artificial conditions induce heavy mortality. In that case all the chicks raised were intended for early slaughter. The breed used was that found locally, the Braekel.

It may be mentioned that in nearly every section of France and Belgium these small birds are obtainable, varying in accordance with the breed of each district, though the prices are highest and the demand greatest in the metropolis of each country. One prominent feature of both lands is that almost every area has its own breed of fowl, and that very few other races are met with except in the yards of amateurs.

As far as I am aware the solitary instance of successful specialised rearing of milk chickens is in North Western Germany, where large quantities are annually produced. So much is that true that what are called Hamburg Chickens have largely displaced the French on our London markets, and



have brought down the price. At one time 1s. 6d. to 2s. 6d. each were the regular wholesale values, but now from 1s. 2d. to 1s. 10d. is about the range. Production is chiefly in the Provinces of Oldenburg, Hanover, Schleswig-Holstein, and near to Lubeck, and the producers are usually smallholders, the maximum of any individual being about 800 birds per annum. The season extends from October to June, and the use of incubators and brooders has made possible this development, at least for earlier broods, all of which are killed. In the Spring a portion of the pullets are retained for breeding purposes. When ready, the birds are sold to dealers who undertake to do the work of killing and sale. One establishment at Winsen in Hanover, during the busy season frequently handles 2,000 in a day.

At one time what is known as the Ramelsloher was almost universal. This is a medium-sized fowl, having much of the Leghorn character, perhaps a little larger in body. There are three varieties, the White, the Black, and the Speckled. The comb is single and medium in size, the neck long, the tail full, and the legs and feet slate, while it has a small white earlobe. As a layer it is exceedingly good, and that quality is the main reason for its popularity. It is a quick grower, but we think the flesh is as fine as that seen on the Campine, than which it is slightly larger. With a view to the production of milk chickens, approaching the French in size, the German Chambers of Agriculture have introduced other breeds, notably Orpingtons, Wyandottes, Dorkings and Faverolles, of which the two first named have been most successful. It is claimed that by the use of these races the chicks can be brought to the size required four to five days earlier than with the Ramelsloher all of which means a saving in cost. The weights as a rule range from 8 to 10 ounces when dead, and the price paid to producers varies from 9d. to 11d. each. It is stated that this leaves a fair margin of profit to them, in which connexion it is well to remember that the standard of life of these people is not high, even though the greater purchasing power of money in German is realised.

Where hens are used for hatching, then it is customary to convey the chicks in a basket after they are dried off to the house kitchen, and keep them near the fire or oven. With the increased use of brooders this plan is unnecessary, as it is undesirable in every way. The first food consists of groats (shelled oats) and milk, which is found to be the most valuable of all in order to give the birds a good start. After two or three days whether in brooders or restricted cages, where they live to the end, as they are not given liberty at any time, the food supplied is usually barley meal prepared with soured skim milk, and as an alternative groats and buckwheat, the two latter fed in litter. In the Winsen district many of the raisers use fresh cooked river fish minced and mixed with the meal, as this is thought to promote rapid growth and does not

adversely flavour the flesh. The period of growth is five to seven weeks.

So far as the United Kingdom is concerned the production of milk chickens is very small, although many of the best poulterers prefer English when they can get them, and are willing to pay good prices. Unless the business is conducted upon a large scale, which has not heretofore been profitable, there would have to be unity of action over a sufficient area, and that stage has never been reached. Hence we depend for supplies mainly upon France and Germany.

From what has already been stated it is evident that the profitable production of milk chickens must be in one way, and this is where a large number of light bodied fowls is kept with the main object of producing pullets as layers, in the doing of which an equal number of cockerels will be bred. It will add substantially to the returns if these latter can be sold at an early age, when they will produce practically as much as would be the case several weeks later, when the food cost will have been sensibly increased. Such might be attempted by the larger breeders of Leghorns, etc., and in those districts where a considerable number of smaller breeders keep the type of fowl here named. Or, on the other hand, as in Germany, where a large number of small holders take up the same branch, co-operating in a Co-operative Society or with a trader who will undertake the work of killing and marketing. I do not imagine that the demand for these little chickens will ever attain large dimensions or become general. It is, however, one that is capable of a fair increase, and prices for suitable birds marketed at the right season are good.

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#### Duck's Remarkable Vitality.

The farm manager at Inshriach, near Aviemore, relates an instance of remarkable vitality in a wild duck—one of a brood hatched there by a hen three years ago. The duck always fed with the rest of the poultry. On the 13th of last month some straw was being removed from the stackyard to the barn. On the same day the duck disappeared, but as it had done so before at mating time, no attention was paid to the matter. As time wore on, revealing no trace of the duck, it was naturally thought that it had sought a new home. The other evening, however, one of the men employed on the farm had occasion to remove part of the straw in the barn, when from underneath the pile there crawled away into the darkness the long-lost duck. Next morning it made its appearance from the poultry shed along with the other fowls. Once plump and fat, it was now a mere bunch of bones and feathers, a natural result of being imprisoned under a considerable weight of straw for nineteen and a half days, without food or water, and with comparatively little air. The duck now seems but little the worse of its experience.—*Scotsman*.



## THE POULTRY PLANT AT GARFORTH.

FOR nearly twenty years the Leeds University, in association with the education committees in the three Ridings of Yorkshire, has given considerable attention to poultry instruction, more especially by means of lectures throughout the entire area. The success of these has been very great, both as to attendance and influence exerted. Only those who are familiar with these northern counties can realise the keenness of interest shown by men and women alike, more especially in the West Riding. At one period these were mainly fanciers, for the exhibition system was practically born in Lancashire and

have since 1898 had a teaching, demonstration, and experimental farm at Garforth, a few miles out of Leeds, consisting of more than 300 acres, upon which is a small poultry plant, where very useful work has been done, though it is inadequate to the importance of the poultry industry in the county, and considerable extension is required. In a field to the west of the stack yards are two ranges of houses, the larger of which has eight compartments with runs to match, and a smaller house has four runs. One of our photographs show the front of the latter, and the other a section of the larger



**The Main Buildings at Garforth, where the farm belonging to The University, Leeds, is situated.**

Yorkshire. Now utility holds the field. All the growth, which has been very great, has been in that direction, although there are still many prominent exhibitors in the premier county. The food supply of this populous area is a serious problem, and the demand for eggs enormous. A great part of this development is due to the county councils and Leeds University, as also the indefatigable and able efforts of Mr. Fred. W. Parton, who has been lecturer at the University for nearly fourteen years. His name is well known to readers of the ILLUSTRATED POULTRY RECORD.

The University and County Agricultural Council

house, with entrance to roosting compartment and the trap nests. In addition there are a number of portable houses scattered over the fields, as that system is taught as most practicable for farmers. The fixed houses have all open-fronted runs.

Some remarkable results have been obtained with the breeds kept, which are typical of their respective races, but undue consideration is not given to purely show points. We were very struck with the even quality of the various birds, as the policy adopted has been to purchase good stock. The breeds kept are Scotch Grey, Faverolles, White Leghorn, Silver Wyandottes and Rhode Island Reds. One of the



most interesting features is the wonderfully even average of laying during a period of five years, as shown in the following tables.

It may be mentioned that the Rhode Island Reds were only obtained last year.

### POULTRY EXPERIMENTS.

(Ohio Agric. Expt. Sta., Circular No. 118.)

THIS circular relates to a co-operative investigation on the profitableness of poultry when kept under farm conditions.

BREED.	Average Number of Eggs laid per Bird.									
	1911.		1910.		1909.		1908.		1907.	
	Pullets.	Hens.	Pullets.	Hens.	Pullets.	Hens.	Pullets.	Hens.	Pullets.	Hens.
Scotch Grey...	143	140	146	138	142	136	132	134	140	134
Faverolles ...	138	128	140	134	137	123	133	120	127	125
White Leghorn ..	152	—	143	139	128	137	154	131	145	142
Buff Orpington ...	—	120	—	139	135	—	*122	—	—	—
Silver Wyandottes...	137	143	136	139	134	139	131	140	133	137

\* From Pullets not trap-nested or kept in pens.

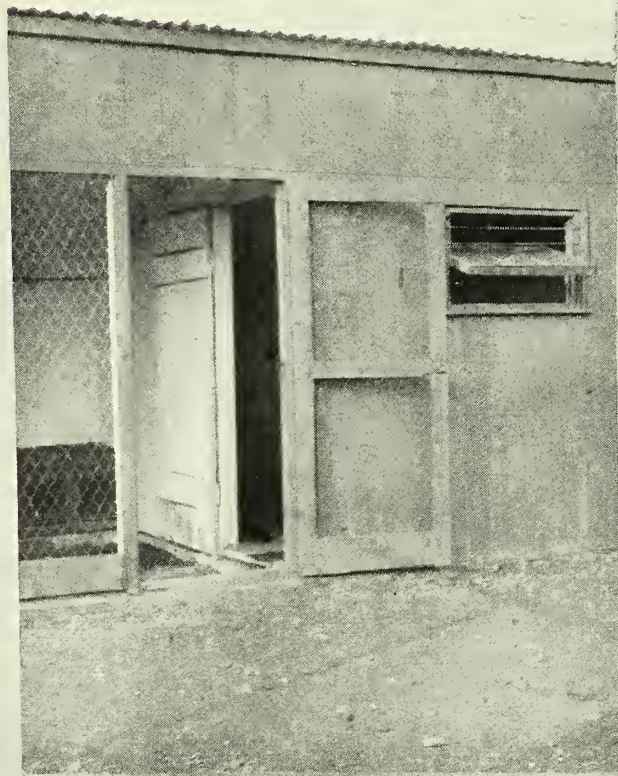
BREED.	Highest Individual Number of Eggs.									
	1911.		1910.		1909.		1908.		1907.	
	Pullets.	Hens.	Pullets.	Hens.	Pullets.	Hens.	Pullets.	Hens.	Pullets.	Hens.
Scotch Grey ..	149	147	151	143	149	138	140	138	143	136
Faverolles ...	149	133	147	140	146	127	143	129	130	127
White Leghorn ...	157	—	148	143	159	143	163	140	146	144
Silver Wyandottes...	145	148	142	146	141	145	138	145	135	140

The investigations concerned flocks kept in the city and penned throughout the year, flocks located in suburbs with limited range, and flocks on the farm with unlimited range. The co-operators were located in thirty-six counties of the State, and represented widely varying phases of the poultry industry.

In conducting the experiment, each flock was inventoried at the beginning and again at the end of the year, and each co-operator was furnished with a pad of twenty-four blank forms so that a duplicate record for each month might be kept; one of these records was sent to the station and one was retained by the owner of the flock. The forms provided for a statement of summaries, so that the totals from the monthly records might be carried forward, and one copy of the summary was sent to the station at the end of the year in order to check the monthly return sheets of the flock. Average results per annum were as follows:—

#### AVERAGE RESULTS FROM EIGHTEEN FLOCKS KEPT ON FARMS.

	No. of fowls.	Eggs per hen.	Value of equipment.	Labour cost per fowl.	Feed cost per fowl.	Value Eggs sold.	Value Poultry sold.	Total cash receipts.
			£ s. d.	s. d.	s. d.	£ s.	£ s. d.	£ s.
Average	121	71	13 13 4	1 2	2 6	25 4	9 10 3	34 15



Sectional view of one of the many scratching sheds at Garforth. [Copyright.]



	Eggs used.		Poultry used.		Profit per Fowl.
	No.	Value.	No.	Value.	
Average	1,056	£ s. d. 3 16 8	28	£ s. d. 2 17 4	s. d. 3 7

AVERAGE RESULTS FROM TWELVE TOWN FLOCKS KEPT WHOLLY OR PARTIALLY CONFINED.

	No. of fowls.	Eggs per hen.	Value of equipment.	Labour cost per fowl.	Feed cost per fowl.	Value Eggs sold.	Value Poultry sold.	Total cash receipts.
Average	46	70	£ s. d. 18 8 10	s. d. 2 6	s. d. 4 0	£ s. d. 5 12 4	£ s. 6 2	£ s. d. 14 14 3

	Eggs used.		Poultry used.		Profit per Fowl.
	No.	Value.	No.	Value.	
Average	916	£ s. d. 3 9 10	21	£ s. d. 2 1 5	s. d. 1 6

The result of the investigation showed that :—

- 1. Both in town and country small flocks gave greater profits than large flocks.
- 2. Flocks with unlimited range produced better profits than flocks partly or wholly confined.
- 3. Farm flocks were more profitable than village or city flocks.

Combination of Buyers.

High prices of eggs and poultry are hitting many people. It is announced that the New York City hotel keepers are combining to purchase direct from producers instead of through the ordinary trade channels. This affords an opportunity for co-operation.

Incubators in Argentina.

The Minister of Public Works of the Province of Buenos Ayres is organising an exhibition of incubators, by way of popularising the use of these articles. Entries for the competition must be made to the Association de Avicultores (Centro de Periodistas, Calle 54, Numero 490) before May 3rd, and all incubators must be presented by May 5th. The first prize offered is £100.

New Zealand Eggs in Canada.

Some time ago we reported that a trial shipment of eggs had been sent from New Zealand to British Columbia. The reports show that the quality was fairly good, but the financial results are unsatisfactory. The cost of carriage and duty (1d. per dozen) worked out at 4s. 2d. per 120, which is heavy.

“THE MANAGEMENT OF CHICKENS.”

By William W. Broomhead: “Poultry’s” Practical Handbooks. Price 1/-.

Mr. Broomhead is too well known to readers of the ILLUSTRATED POULTRY RECORD to need any introduction. His monthly notes on “Fanciers and Fancy Matters” are universally acknowledged to be as helpful as they are interesting. His opinions on all matters dealing with poultry are sound and founded on his general all-round experience. We welcome, therefore, his addition to the Practical Handbooks under the title of “The management of chickens.”



End of the long range of Scratching Sheds at Garforth. [Copyright.]

Into one hundred and ten pages of matter Mr. Broomhead condenses information of the greatest value to those interested in the breeding of Fancy or Utility Fowls. An idea of the ground covered by this little work can be obtained from a perusal of the list of contents. The eleven chapters cover such subjects as, the coop; the artificial methods of rearing; foods and feedings; training for exhibition; preparing and washing show birds; and the treatment of utility stock from shell to laying or killing. Nothing of importance is omitted, but at the same time no unnecessary redundancy is observable. It fulfils ably the design of its author that it shall treat of three distinct objects for which it should pay to rear chickens.



## THE POULTRY INDUSTRY IN NORTH WALES.

By A. T. JOHNSON,

(Of Rowen, North Wales).

WHETHER poultry-keeping in the northern half of the Principality is in a more backward condition than it is in other parts of these islands, I do not pretend to know. But that it ought to be not only more prosperous and important than it is, anyone who knows anything at all about it must be convinced. Doubtless most places in the Kingdom are more or less behindhand in this matter. That is a statement upon which there can be but one opinion. But some counties or districts are better adapted for poultry-keeping than others, and North Wales is one of them.

Let us begin with the Welshman himself. Is it possible to make him into a successful poultry-breeder? I mean, of course, a man who can make his fowls a really profitable part of his agricultural work. From what I know of him, and I have rubbed shoulders with him for more years than I care to count, I am very strongly of the opinion that he is better adapted for poultry-keeping than the natives of many parts of England or the sons of Scotland. In the first place, he has always been a farmer of small holdings, a worker with comparatively little things. If one could scarcely call him thrifty, in the sense of the word when it is applied to the Scot, we cannot deny that he is, as a farmer, resourceful, quick to learn and pick up useful hints, painstaking and neat. Witness the thatching of his stacks, the cutting of his hedges, the way he can build a wall or make a fence, the straightness of his furrows and the geometrical symmetry of his stooked sheaves. Whatever else he may be, these things and others prove that it is possible for the Taffy to be averse to slovenliness. They show that he has a straight eye, which generally means an observant eye, and that is one of the most essential attributes to success in this business. From actual experience, too, I must say that, of the many men whom I have employed from time to time on poultry farms in the Principality, the natives were far more quickly trained than any others. Most of them seemed to have a natural aptitude for the work, a quick-witted faculty for picking up things. By which latter the reader will not, I trust, accuse me of insinuating that Taffy deserves the felonious character bestowed upon him in a popular refrain!

The counties of North Wales, more especially to the western side afford, in their topography, ideal conditions for poultry. You have some rich bottom lands in the valleys, but for the most part, the farms are situated on the well-drained, shaly soil of hill slopes which rise in a gentle incline to the higher sheep walks of the mountains. It is a country where there is a vast amount of marsh land, thin turf on rocky places covered by scrubby trees,

gorse and heather, providing dry, warm, well-sheltered runs—ideal places for poultry of all kinds, especially turkeys, which one seldom sees. Then, in the very small fields surrounded by their protective hedges, often built on banks, the man who goes in for poultry is afforded not only shelter for his flocks, but the latter can be kept closer together without fear of mixing, than would ever be possible in larger fields without the use of netting. These little fields are natural pens, providing a screen from every wind that blows, without any outlay on the part of the owner; and as regards climate, I do not think the most fastidious could find much fault with that of these western valleys. There is a lot of rain at times, especially in autumn, but a comparative freedom from east winds in the hatching season, and a high winter temperature are compensating advantages.

The most curious point about this matter is that while North Wales, as I have tried to show, is so well adapted for poultry-keeping, it is at least as backward in that respect, as most other parts of these islands, and that in the face of the fact that her market is one of the best. With regard to this latter, it must be remembered that it is a summer market, when production is cheaper than at any other season. The thousands of visitors who go to North Wales for holidays no longer confine themselves to the seaside towns as once they did. They now swell the population of remote villages, and from July to October it is often difficult to get farm-house lodgings unless you speak well in advance. The result of this is that eggs are generally at a premium throughout summer and autumn, and chickens which have practically found their own living, are readily sold at a good price for what they are. Thus the Welshman has exceptional facilities for "making good" in this line. Unless he specialises in "springs" for Easter and Whitsun, he need not worry about hatching table chickens in the early months; but, on the other hand, if he would realize that pullets of a precocious breed hatched in early March, or even February, would yield returns from the following June, right on to November, he would be more than half way towards making a success of his poultry. Those birds would fill the gap caused by the moulting of the old hens, and help to supply that extraordinary demand occasioned by a shortage of production and a large and sudden influx of customers with money to spend.

But in spite of his aptitude for the work, in spite of a steadily-growing demand under his very nose, Taffy, like the majority of our agriculturalists, is slow to make a definite move, hard to shift out of



the old rut. Like many other others he still practices the insane policy of holding over large quantities of eggs, without any attempt at preservation, which he passes off as "fresh country" to visitors, who are getting more cautious in such matters than they used to be. And the custom of exchanging his eggs for groceries at the local shop, though this has oft-times been his readiest market, is a bad one, because, in the first place, the honest producer does not get full value for his eggs. He may have held them over for not more than the customary week, i.e., until he goes a-shopping, or until the grocer's cart comes round. But he gets no more for his week-olds than his neighbour whose eggs might be quite uneatable. The principle is also wrong at bottom for the grocer too often takes eggs, especially in the cheaper season, with a bad grace. They are awkward things to handle, and you may be sure he gives no more for them than he can help. Furthermore, in many instances he refuses to have them at any price, save on the understanding that he gets the farmer's butter as well. All this sort of thing is a direct discouragement to the egg business. Even supposing the farmer only keeps them a week, the eggs usually lie at a village shop for another week, so that by the time they are transferred to larger establish-

improved method of production is concerned, I have always felt that example is more precious than precept. Lecturers and advisers are very well to a certain point. They have done a lot of good: but one practical object lesson is worth ten years of lecturing. Hence, the sooner we get demonstration farms, or, rather, *demonstrations on farms*, showing how poultry can be profitably kept as an adjunct to other branches of agriculture, so much the sooner will this industry assume its proper place and value. And I know of few districts as suitable for such work as a country of small-holders like North Wales. I can remember a time, and it is not long ago, when I bought nice "lean" chickens (thirteen or fourteen weeks old) in Llangefui market for 1/6 a couple; when eggs, for long periods in spring and summer, were eighteen to twenty-four for a shilling. To-day you will have to pay just twice as much for the chickens, and eggs seldom stay above twelve for a shilling in the cheapest districts for more than two or three weeks. Therefore if this extraordinary increase is obtained against all manner of obstacles, such as apathy, lack of organisation, and foreign importation, it needs no words of mine to prove that the field is a promising one for demonstration work and other solid forms of encouragement.



General View of the Farm at Garforth. (See page 361).

ments in towns and find their way to the consumer they are anything but fresh. They are of worse quality than Danish or Irish, which the sagacious house-wife takes in preference.

The remedy for all this is, of course, obvious. Co-operation and organisation are the only factors which can put this business on a sound foundation. The country has been ready for some such guiding hand for long enough, but the latter was never more essential than it is to-day. So far as

### Neglected Poultry.

Mr. J. W. Jagger, speaking at a meeting in Cape Town, is reported in the *Farmer's Weekly*, (Bloemfontein) to have said that "The (South African) Union, through the Agricultural Department, spent over £400,000 a year in promoting agriculture, but not a sixpence appeared to be spent in furthering the poultry industry—an industry which would scatter money among the the poorer part of the population."



## THE POULTRY EXPERIMENT AT HASLINGTON.



ON April 1st, a considerable number of poultry specialists, on the invitation of Mr. A. Allsebrook, Small-Holdings Commissioner of the Board of Agriculture, visited the chicken rearing experiment which is being carried out at Haslington Hall, near Crewe. We prefer to call it an experiment; it is too early as yet to call it a practical demonstration. The party was met at Crewe by Mr. A. Allsebrook, Mr. R. Ward, of the Cheshire County Council Education Department, and Mr. F. G. Paynter, conductor of the experiment. After lunch Mr. Allsebrook gave an interesting summary of the small-holdings movement in Cheshire, explaining the reasons why the Board of Agriculture had instituted this experiment. Mr. Paynter then gave a brief outline of his system, and explained that he has been conducting experiments for about nine years in the North of England, where his experiments attracted sufficient attention to encourage him to proceed, in the belief that he was engaged upon work of great importance to the nation.

The aim of the present experiment is to show the small-holder the possibilities of making £200 a year, commencing operations with a capital of somewhere about £400, and this result is to be achieved by producing 4,000 birds during the season at an estimated average profit of one shilling each. It would be premature at this stage to enter too closely into the financial details of the scheme, and it is preferable to await the completion of the experiment before dealing fully with the profitable possibilities, but the condition of affairs up to the present, and the results previously attained by Mr. Paynter suggest that his claims are not unduly extravagant. It is a one man experiment designed to show what one man's labour can produce, and it is obvious that results must depend mainly upon the individual and his experience. The ideal holding for Mr. Paynter's purpose would be about ten acres. A third of its area would be required in any one year for the poultry, and in rotation each third would be used for chickens, hay, and grazing. Mr. Paynter claims that the hay and the grazing would, like the Irishman's pig, pay the rent, and that the small-holder and his wife could devote virtually all their time to the chickens. Poultry, of course, forms an increasingly large proportion of the ordinary wholesome meal.

**THE SYSTEM.**—The complete system, as practised by Mr. Paynter, consists in hatching chickens at the rate of about 120 a week from December to June, and in rearing them until the age of twelve to sixteen weeks, when they are sold (alive) for table purposes. The time necessary for the work is from the first week in December, when the first incubator is started, until the middle of October, when the last twelve to sixteen weeks-old fowl is sold.

**THE METHOD.**—Summarised, the method is as follows:—About 250 eggs are bought every week from December 1st, to June 7th. These eggs are incubated, one incubator of at least 240-egg capacity being started each week during that period. Each hatch produces about 120 chickens. These chickens are reared in brooders on grass runs, and at the age of twelve to sixteen weeks they weigh about 3½ lbs. each, and command a ready market at prices varying from 3/9 each in April, to 2/6 each in September.

**DETAILS OF THE PROCESS.—INCUBATION:** Each incubator is started on a Sunday, the eggs being received and got ready on Saturday. Mr. Paynter keeps three incubators going, and a fourth in reserve, in case of accident, and so as to give each incubator every fourth week off for cleaning and repairs. On the seventh day the eggs are tested, and unfertiles are made use of in other ways. The eggs are turned twice daily until the eighteenth day. The incubators used by Mr. Paynter are of the hot air type. Great care is taken as to the source from which eggs are procured, and, if possible, the stock birds are inspected and it is ascertained that they are of a suitable age, and properly fed, and, if possible, kept on a free range. The price Mr. Paynter pays per dozen for eggs is as follows:—December, 3/-; January to February, 2/6; March, 2/-; April and May, 1/6.

**REARING (TWELVE TO SIXTEEN WEEKS).**

**First Week.**—The chicks are left in the incubator until the twenty-second day, when they are transferred to brooders. For the first week these should be kept close at home (if possible, under cover), so that the chickens may be under constant observation, and may be trained to run up to the hover of the brooder when they feel cold, and so avoid the risk of their packing or crowding. The brooders used by Mr. Paynter are of the hot air type. Each is capable of accommodating sixty chickens, up to the age of five weeks, so that the output of one 240-egg incubator requires two brooders to begin with.

For the first week the food given consists of the following mixture:—Wheat (cracked), 50 per cent.; millet, 15 per cent.; canary-seed 15 per cent.; best meat, 10 per cent.; maize, (cracked), 5 per cent.; rice, 5 per cent. A handful is given when the last handful has been cleared up.

Water *ad lib.* is given twice a day.

Grit is scattered on the floor plentifully when the chicks are first put in, and later is constantly kept before the chicks in suitable troughs. An abundant supply of grit at all times is considered important.

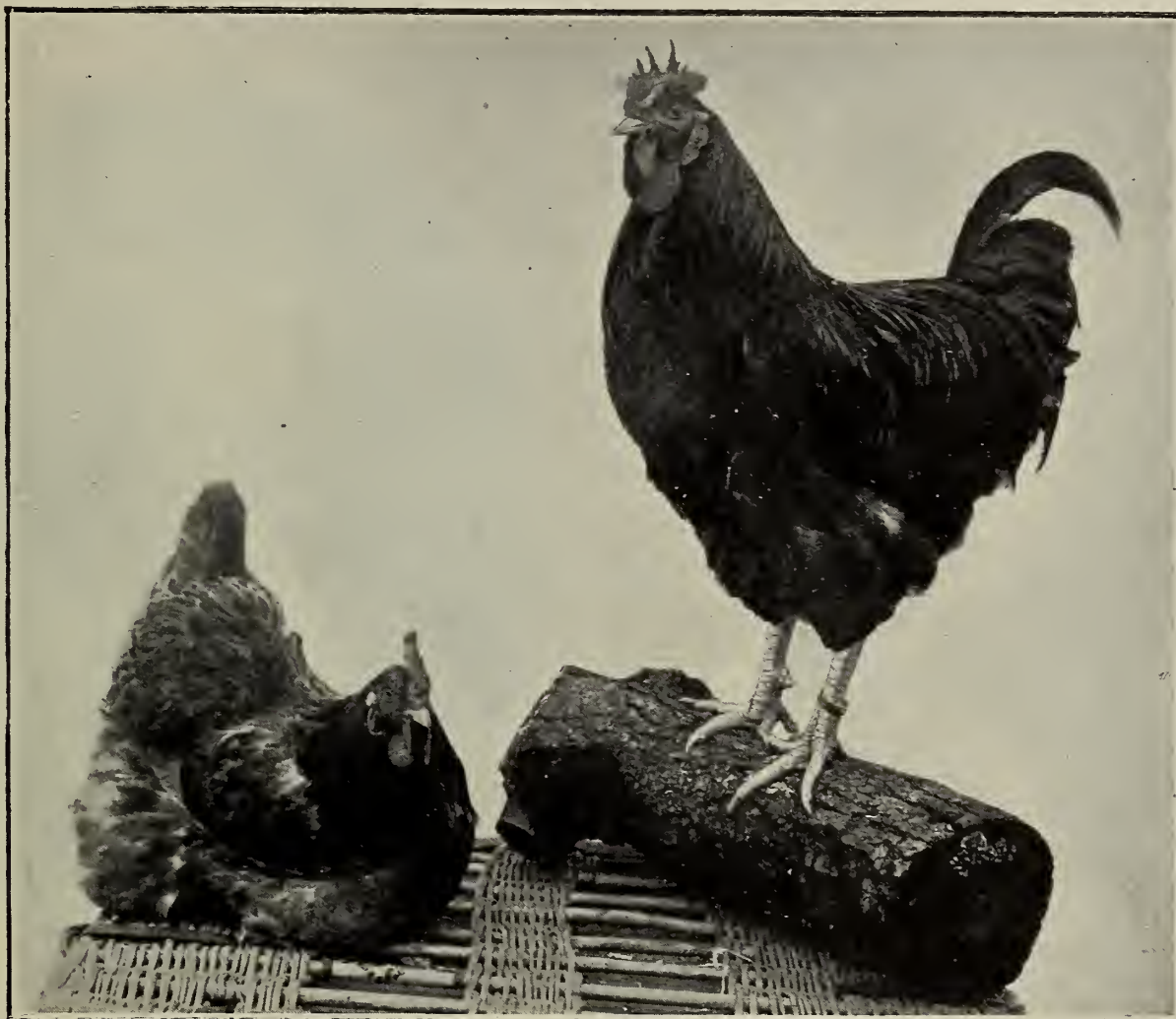
**Second Week to Fourth Week.**—When the chicks are a week old they are moved to a brooder in the rearing field, having a small wire run attached to the end of the brooder. This small run is removed at the end of one day and then arranged to surround the brooder. On the third day this run is



taken away, thus giving the chickens access to the large run, which is enclosed by wire netting 2 feet high, and is 9 yards by 40 yards in area.

The food given during this period is as follows: First feed, daybreak. Overnight three tins (with wire guards to prevent scratching) are put out, containing respectively: (1) boiled rice; (2) beef scrap; (3) pin-head oatmeal or groats. Second feed, 9 a.m. A soft food is given, consisting of biscuit-meal and 10 per cent. of meat dried off with equal parts of sifted barley-meal and sharps. At

after hatching) they are fed as follows until they are seven weeks old:—Food: The hours of feeding remain the same, but—(1) boiled wheat is given instead of rice. (2) instead of dry chick feed the following is given: 75 per cent. whole wheat, 25 per cent. equal parts cracked maize, millet, and hemp. Water and grit as before. When five weeks old, one-third of each hatch is transferred to another brooder—i.e., the 120 chickens are divided into three lots instead of two. Each lot should have a wire run to itself as before.



**A Pair of Red Orpingtons belonging to Mr. Holmes Hunt, the originator of the breed.**

the same time any oatmeal not cleared up in tin 3 is put away. (A flat box with a tin lid is kept in each run for storing these tins.) Third feed, 1 p.m. A feed similar to that given at 9 o'clock is given, and tin 2 containing any meat scrap not cleared up is put away in the box. Fourth feed, half-an-hour before sunset, or 6 p.m. (whichever is the earlier). As much dry chick feed is given in pans as the chicks will eat. Water *ad lib.* A plentiful supply of grit in suitable troughs.

Note.—The brooders have their floors well covered with sand, and are cleaned out once a week until the chicks are four weeks old, and twice a week afterwards.

*Fifth Week to Seventh Week.*—When the chicks are four weeks old (i.e., at beginning of fifth week

*Eighth Week until Ready (Twelfth to Sixteenth Week).*—When the chicks are seven weeks old they are removed to larger runs (100 yards by 10 yards) and larger houses of the Sussex ark type. The feeding is as follows:—First feed, 7 a.m. (or as early as possible): meat, 1½ lb.; biscuit-dust, 2¾ lb.; pollard 1 lb.; total, 5 lb. This is soaked in 1¼ gallon of boiling water and dried off with barley-meal 3 lb.; best fine sharps, 6 lb. Second feed, 1 p.m. The same again. Third feed, 6 p.m., or half-an-hour before sunset (whichever is earlier). Whole wheat, 85 per cent.; cracked maize, 15 per cent.

Those who desire to visit the scene of operations should write to Mr. F. G. Paynter, Haslington Hall, Crewe. The demonstration may only be viewed by appointment.



## FANCIERS AND FANCY MATTERS.

By WILLIAM W. BROOMHEAD.

### Death of Mr. Harry Wallis.

It is with profound regret I have to announce that Mr. Harry Wallis died on March 22nd, as the result of an accident in the hunting field near his home. As an exhibitor of poultry, and modern Langshans in particular, Mr. Wallis has been before the Fancy for something like forty years; and among present-day fanciers none was held in higher esteem. His was indeed a charming personality, and wherever he was known he was respected and admired. Abhorring ostentation, he accomplished in an unassuming manner untold good in the cause of poultry. He took the greatest interest in every movement appertaining to the Fancy. Besides his connection with the Poultry Club since 1886 and lately as president and chairman, he was for years hon. secretary of the Langshan Society, on the council of the British Dairy Farmers' Association, a member of the executive of the Grand International Show, president of the Blue Langshan Club and of the Spangled Orpington Club, chairman of the Essex branch of the Poultry Club, and a member of the committee of the Variety Orpington Club. As an exhibitor his Black Langshans for years gained the highest honours at all the best shows, while he was not unknown among fanciers of Blue Langshans, Spangled Orpingtons and Rhode Island Reds. He also acted as judge on occasions, and had fulfilled that position at the Palace. Such, briefly, was the "Fancy" career of a gentleman who reared fowls purely for the recreation it afforded him, and not with any pecuniary motive.

Mr. Wallis, who was 61 years of age, was born at Louth in Lincolnshire, where he was educated. He came to London in 1867 to fulfil a position in the London agency of Messrs. Clark, Spence & Co., of Ceylon. He had lived at Warley, Brentwood, Essex, for nearly forty years, and his interest in the social life of the district earned for him the esteem of all classes.

Mr. Wallis was senior partner of the firm of Spence, Wallis & Co., Philpot Lane, London, East India merchants—which was established in 1885 with the late fancier as principal acting partner. He was also a director of Seabrooke & Sons, of Grays; the P.P.K. Rubber Estate; the Doolgalla Rubber Estates; the Northumberland Rubber and Tea Estates; the Duckwari Tea and Rubber Estates of Ceylon; and the Kebonso Rubber Estates, of Java. For years he had been chairman of the Great Warley Parish Council, and in that capacity did good work. He had been a Justice of the Peace for some time, sitting at the Brentwood Bench; and his public work also included his office as a governor of Brentwood Grammar School and his membership of the Romford Board of Guardians. Mr. Wallis was also interested in horse

shows, and had judged at fixtures in various parts of the country, as well as at the Essex Agricultural Show, while he was a capable amateur gardener and a specialist in roses, which he had judged at the big shows.

He leaves a widow and two grown-up sons and daughters to mourn his loss; and the whole Fancy and many outside its limits will join in sincere sympathy with the bereaved family.



A typical Wyandotte head.

[Copyright.]

### Club for Blue Orpington Ducks.

Mr. W. Holmes Hunt (of Brook House, Hellingley, Sussex) says that "As there is now no club that caters for the Blue Orpington duck" he has, at the suggestion of one or two well-known breeders and exhibitors of this beautiful variety of waterfowl, decided to assist in the formation of one; and to help the movement forward he is willing to act as secretary *pro tem*. The subscription has been fixed at 5s. per annum. As soon as Mr. Hunt sees what support is likely to be accorded him in the way of members "and hard cash—the latter most important," he will immediately endeavour to arrange for classes to be put on for Blue Orpingtons at the Dairy and the Palace Shows. No doubt those few fanciers who are in Blues will be



pleased to hear of the kindly interest Mr. Hunt is taking in the variety. But, what is wrong with the Orpington Duck Club, anyway? This body has been established for a few years now, and if I mistake not it has been instrumental in getting the variety recognised by fanciers and show committees as quite distinct from the Swedish Blue, or the Blue Forest, or any other breed of duck having blue plumage. This club caters for Buff and Blue Orpington ducks, the only known varieties at present, since such as Black, White, Red, Jubilee, Spangled, Cuckoo, and any other variety, have not yet been made. On the face of it then it seems rather unwise to attempt to form a club on the lines suggested, and Mr. Hunt and his "one or two well-known breeders and exhibitors" who have approached him on the subject will be better employed by joining the existing club—which, as I say, caters for two varieties only—and seeing that the Blue gets their support. The Buff, it must be acknowledged, is more popular with waterfowl fanciers, but there is no reason why the Blue should not go ahead under the wing of the Orpington Duck Club.

#### **The Welsh Federation.**

This federation—the South Wales and Monmouthshire Federation of Fur and Feather Societies—has been in existence for about twelve months, and during that time it has done much useful work. It is at present composed of about thirty societies, and is being conducted of good business lines with experienced fanciers at the head of affairs. The federation's special prizes, which have been offered for competition for most points at the end of the season, have been the means of considerably increasing the number of entries at the different affiliated shows; and to a large extent it has been the means of preventing the clashing of shows, which clashing, as fanciers are doubtless aware, is very detrimental. The hon. secretary of the federation is Mr. A. A. Gordon McLucas (of 48, Rosser St., Maesycod, Pontypridd) and he will be pleased to give full information concerning it to any clubs that have not yet become affiliated.

#### **Back to the Fold.**

Apropos my note on the attempt to form a Blue Orpington Duck Club, news reaches me that one of the single variety specialist clubs—so common now-a-days in the Fancy, though at times of questionable advantage—has decided to return to the fold. I refer to the Silver Pencilled Wyandotte Club, the members of which have decided to amalgamate with the United Wyandotte Club, since they are of opinion that such a step will be in the best interests of their special variety. In connexion with this change it is the wish of the late secretary, Mr. Henry Bromet (of Highfield, Tadcaster), that the United Wyandotte Club takes over the S.P.W.C. free of debt, and he is appealing to members to subscribe towards liquidating a

deficit of over £9, the amount of a loss on the club's show some time since. It would be a good plan, by the way, if some other single variety clubs which are now struggling along were to join hands with the breed club.

#### **The White Orpington Club.**

In the March issue of the ILLUSTRATED POULTRY RECORD I had something to say concerning the manner in which the White Orpington Club had been conducting its affairs. I am pleased to be able to report that the agitation in certain quarters has had the desired effect of infusing new life into the club. At the annual general meeting held recently, and at which the election took place, the hon. secretary and treasurer (Mr. Frank Bloomer) did not offer himself for re-election owing to ill-health and pressure of business, and Mr. R. Gwynne-Furley (of Bryn Amlwg, Prestbury, R.S.O., Gloucester) was elected to fill the vacancy and to take up his duties April 10. Mr. W. Richardson was re-elected president; Messrs. W. J. Golding, H. Currie, and R. Gwynne-Furley were elected vice-presidents with Mr. Murray Lindner re-elected, while Miss Carey and Messrs. John Wilkinson, M. Dalton Cowap, and W. A. Roberts were elected to fill the vacancies on the committee occasioned by members retiring by rota according to rule. At the committee meeting which followed, fifteen members were elected, hence it looks as though the club will go ahead again. At that meeting, I see it was decided to issue a year book at once, presumably on the old axiom Better late than never.

#### **Liverpool Show.**

In connexion with my notes in last month's RECORD, concerning the resuscitation of Liverpool Show, I see that the date has been definitely fixed for November 4 and 5, and that the event will take place in the North Haymarket. It will comprise poultry, pigeon and fur sections, and I understand that several specialist clubs are making enquiries as to fixing up at Liverpool for their annual shows. It is certainly a very suitable venue for those desiring to hold their events in the north of England. Communications with regard to the show should at present be made to Mr. W. Hooley, 15 Clarence Road, Birkdale, Southport, Lancashire.

#### **A Club for Frizzled Fowls.**

I am glad to see that fanciers of Frizzled fowls have formed a club in Ireland and that a standard of excellence has been issued. The varieties catered for are White, Black, Blue, Grey, Red, Buff, and Partridge, and rose or single comb is allowed. In the new standard most points—35 out of the ideal 100—are allowed for curl, but 25 are given for colour. The breed has for some years now been an almost extinct one as regards English poultry shows, but with a club to look after its interests we should see more of these quaint fowls at the exhibitions.



## CHINESE INCUBATORS.

**T**HE late Professor F. H. King, D. Sc., of the University of Wisconsin, made a long journey, we think in 1909 and 1910, through China, Korea and Japan, the records of which are embodied in a marvellously fascinating and instructive book, entitled "Farmers of Forty-Centuries," which has been published by his widow, Mrs. F. H. King, of Madison, Wis., U.S.A. (\$2½) her husband having died in 1911. As showing the remarkable intensification of production this book should be studied by all concerned either in cultivation or stock breeding.

Mrs. King has courteously sent us two photographs taken by Professor King, which are given with the following quotations from this important

family. It was in the extreme rear of the home that thirty incubators were installed, all doing duty and each having a capacity of 1,200 hens' eggs. Four of these may be seen in the illustration and one of the baskets which, when two-thirds filled with eggs, is set inside of each incubator.

Each incubator consists of a large earthenware jar having a door cut in one side through which live charcoal may be introduced and the fire partly smothered under a layer of ashes, this serving as the source of heat. The jar is thoroughly insulated, cased in basketwork and provided with a cover, as seen in the illustration. Inside the outer jar rests a second of nearly the same size, as one teacup may in another. Into this is lowered the large basket



**Four Chinese Incubators in a room where there are thirty, each having a capacity of 1,200 hens' eggs.**

work:

"At this season of the year Chinese incubators were being run to their full capacity and it was our good fortune to visit one of these, escorted by Rev. R. A. Haden, who also acted as interpreter. The art of incubation is very old and very extensively practised in China. An interior view of one of these establishments is shown on this page, where the family were hatching the eggs of hens, ducks and geese, purchasing the eggs and selling the young as hatched. As in the case of so many trades in China, this family was the last generation of a long line whose lives had been spent in the same work. We entered through their store, opening on the street of the narrow village. In the store the eggs were purchased and the chicks were sold, this work being in charge of the women of the

with its 600 hens' eggs, 400 ducks' eggs or 175 geese' eggs, as the case may be. Thirty of these incubators were arranged in two parallel rows of fifteen each. Immediately above each row, and utilizing the warmth of the air rising from them, was a continuous line of finishing hatchers and brooders in the form of woven shallow trays with sides warmly padded with cotton and with the tops covered with sets of quilts of different thickness.

After a basket of hens' eggs has been incubated four days it is removed and the eggs examined by lighting, to remove those which are infertile before they have been rendered unsaleable. The infertile eggs go to the store and the basket is returned to the incubator. Ducks' eggs are similarly examined after two days and again after five days incubation; and geese' eggs after six days and again after



fourteen days. Through these precautions practically all loss from infertile eggs is avoided and from 95 to 98 per cent. of the fertile eggs are hatched, the infertile eggs ranging from 5 to 25 per cent.

After the fourth day in the incubator all eggs are turned five times in twenty-four hours. Hens' eggs are kept in the lower incubator eleven days; ducks' eggs thirteen days, and geese' eggs sixteen days, after which they are transferred to the trays. Throughout the incubation period the most careful watch and control is kept over the temperature. No thermometer is used but the operator raises the lid or quilt, removes an egg, pressing the large end into the eye socket. In this way a large contact is made where the skin is sensitive, nearly constant in temperature, but little below blood heat and from which the air is excluded for the time. Long practice permits them thus to judge small differences of temperature expeditiously and with great accuracy; and they maintain different temperatures during different stages of the incubation. The men sleep in the room and some one is on duty continuously, making the rounds of the incubators and brooders, examining and regulating each according to its individual needs, through the management of the doors or the shifting of the quilts over the eggs in the brooder trays where the chicks leave the eggs and remain until they go to the store. In the finishing trays the eggs form rather more than one continuous layer but the second layer does not cover more than a fifth or a quarter of the area. Hens' eggs are in these trays ten days, ducks' and geese' eggs fourteen days.

After the chickens have been hatched sufficiently long to require feeding they are ready for market and are then sorted according to sex and placed in separate shallow woven trays thirty inches in diameter. The sorting is done rapidly and accurately through the sense of touch, the operator recognizing the sex by gently pinching the anus. Four trays of young chickens were in the store fronting on the street as we entered and several women were making purchases, taking five to a dozen each. Dr. Haden informed me that nearly every family in the cities, and in the country villages raise a few, but only a few, chickens, and it is a common sight to see grown chickens walking about the narrow streets, in and out of the open stores, dodging the feet of the occupants and passers by. At the time of our visit this family was paying at the rate of ten cents, Mexican, for nine hens' and eight ducks' eggs, were selling the largest strong chickens at three cents each. These figures, translated into our currency, make the purchase price for the eggs nearly 48 cents, and the selling price for the young chicks \$1.29, per hundred, or thirteen eggs for six cents and seven chickens for nine cents.

It is difficult even to conceive, not to say measure, the vast import of this solution of how to maintain,

in the millions of homes, a constantly accessible supply of absolutely fresh and thoroughly sanitary animal food in the form of meat and eggs. The great density of population in these countries makes the problem of supplying eggs to the people very different from that in the United States. Our 250,600,000 fowl in 1900 was at the rate of three to each person but in Japan, with her 16,500,000 fowl, she had in 1906 but one for every three people. Her number per square mile of improved farm land was but 387. To give to Japan three fowls to each person there would needs be an average of about nine to each acre of her cultivated land, whereas in the United States there were in 1900 nearly two acres of improved farm land for each fowl. We have no statistics regarding the number of fowl in China or the number of eggs produced, but the total is very large and she exports to Japan. The large boat load of eggs seen on page 373 had just arrived from the country, coming into Shanghai in one of her canals."

In another section he tells of the ducklings seen on one of the great rivers:

"We passed two men in a boat, in charge of a huge flock of some hundreds of yellow ducklings. Anchored to the bank was a large houseboat provided with an all-round, over-hanging rim and on board was a stack of rice straw and other things which constituted the floating home of the ducks. Both ducks and geese are reared in this manner in large numbers by the river population. When it is desired to move to another feeding ground a gang plank is put ashore and the flock come on board to remain for the night or to be landed at another place"

### Inspection of Poultry in Rhodesia.

The Board of Trade are informed by H.M. Trade Commissioner in South Africa that, under the provisions of a Government notice (No. 375 of 1912), dated 28th November, 1912, all poultry imported by rail into Southern Rhodesia is now inspected by an Inspector or sub-Inspector at Plumtree, Bulawayo or Umtali, in order to see that they are free from disease.

Any consignment of poultry showing symptoms of disease may be detained, or, if it is likely to convey infection, the birds may be destroyed.

It is stated that the introduction of these regulations is due to the fact that, although destructive fowl diseases exist in the Territory; several cases have occurred where infection has been introduced from the south and from Portuguese Territory resulting in loss to owners of poultry.

### Mammoth Incubators.

It is stated that the Hall Incubators Company is selling this season between two and three hundred of their mammoth incubators.



### COOKING SMALL BIRDS.

**I**T often happens that a little judicious weeding out has to be done in the poultry yard in order to get rid of those birds which are not required for keeping purposes. As a help at such times we have already, in a previous number of the I.P.R., suggested some excellent methods of utilising the old birds. A few recipes are now given for the cooking and serving of the very small ones.

**Broiled Chicken :** Prepare the bird in the usual way, then cut it right down through the back, flatten each portion as neatly as possible, and truss it as for boiling. When thus prepared put the chicken into boiling water and let it boil for a minute then draw the pan one side and simmer very gently for ten minutes, after which drain well and when quite cold season pleasantly. Brush over entirely with liquid butter or fine salad oil and broil on a well greased gridiron over a clear moderately hot fire. Place the inside of the bird to the fire first and when half cooked turn it, so that when finished it may be coloured a lovely light brown all over. When done enough, dish up the chicken on a bed of creamed potatoes, pour round about a dainty mushroom purée prepared as below, sprinkle the whole with very finely chopped hot parsley, and serve at once. *To prepare the purée:* Choose very fresh mushrooms and after peeling them carefully, chop them finely and put them into a stewpan with a small quantity of fresh butter and stew gently for about ten minutes. After this add four ounces of fine white bread-crumbs, a seasoning of salt and pepper, a teaspoonful of minced parsley, a tablespoonful of lemon juice and sufficient good creamy brown sauce to nicely moisten the whole; stir over a gentle heat until quite hot, then use as directed.

**Fried Chicken :** If broiling is considered a rather difficult process the chicken may be fried instead. To do this prepare the bird in exactly the same way as for broiling, and put it into a deep frying pan containing sufficient boiling clarified fat to quite cover it; keep turning the chicken about so as to brown it equally all over, then when done enough drain well and dish up as directed above. If preferred, a tomato purée may be served instead of the mushrooms. This is exceedingly good prepared as follows: Take a dozen ripe tomatos and after removing the stalks and the portion that adheres to them, cut them in slices or quarters and put them into a stewpan with a quarter of a pint of white stock, a medium sized whole onion, a bunch of savoury herbs, and a seasoning of salt and pepper. Simmer gently until quite soft, then remove the herbs and the onion and rub the tomatos through a fine sieve. Put an ounce of fresh butter and a dessertspoonful of flour into a small saucepan and cook over a gentle heat for three or four minutes, then add a few tablespoonfuls of thick cream, the tomato pulp, and a few drops of cochineal or carmine to enrich the colour. Stir constantly with a

small wooden spoon until boiling point has been reached, then use.

**Marianade Chicken :** Prepare the bird as directed for broiling then put it to soak for an hour or two in a marinade of salad oil, fresh lemon juice, thinly-sliced onion, and chopped parsley, and turn it over once or twice during the time so as to flavour it evenly all through. When sufficiently soaked, drain the bird thoroughly and coat it entirely with beaten egg and finely sifted bread-crumbs; press this covering well in and, if necessary, repeat the process until a perfectly firm smooth surface has been obtained. Broil over a clear moderately hot fire until done enough, then dish up on a bed of fresh crisp watercress which has been well seasoned with salad oil and vinegar. Garnish round the edge of the dish with small rolls of daintily fried bacon and finger pieces of well-made crisp toast, and serve.

**Braised Duckling :** Choose a stewpan just large enough to accommodate the bird and cover the bottom with slices of fat bacon; sprinkle over these a little finely chopped parsley, grated lemon rind, and mixed herb powder, then add the bird which has been properly prepared and cut in halves or quarters. Pour over a small quantity of good stock, cover closely and stew gently until done enough. Have ready some carefully cooked green peas and arrange these as a bed on a hot dish, then when the duckling has been well drained place it neatly on the top. Make a good slightly thickened gravy with equal quantities of the stock in which the bird has been braised, white wine, lemon pickle, mushroom or walnut ketchup, and a small quantity of roux, and when this has boiled and been well skimmed, pour it over the duckling. Garnish with a border of small potato croquettes, chips, or ribbons, and send to table very hot.

**Duckling with Onion Purée :** After preparing the bird in the ordinary way stew it gently until done enough in a small quantity of good stock to which has been added a glass of white wine and a bunch of mixed herbs. Meanwhile, prepare the onion purée as follows: Peel, and cut up small, half-a-dozen medium sized Spanish onions and put them into a stewpan with about two ounces of fresh butter. Then place the pan over a moderate heat and allow the onions to cook gently until quite soft without acquiring any colour; drain away any liquid there may be in the pan, press the onions through a sieve—or a tamis, which is better—and return them to the stewpan. Add an ounce of butter well kneaded with an ounce of flour and a seasoning of salt and stir constantly until the purée reaches boiling point when it is ready for use. Dish up the bird in the centre of a firm, neatly-shaped potato border and strain the gravy over it; then arrange the onion purée round about; sprinkle the latter with a little finely-minced hot parsley, and serve the whole very hot.



### DIFFICULTIES IN CHICKEN REARING.

By F. W. PARTON (*The University, Leeds.*)

THE hatching season is rapidly drawing to a close, and consequently chickens are very numerous, ranging in age from the downy ball of a day old to the well grown chicken of three or four months. Work is constant and arduous, and neglect of any one of the many little details may have after effects which will minimise success.

Many and various are the difficulties that present themselves to the poultry-keeper during the rearing season. One of the worst to face, and one of the most disastrous if the difficulty is not successfully combatted, is that of finding adequate accommodation for the young ones. To do so is often a severe

Whatever plan is adopted they must have plenty of space to allow of their full and proper development. If too many chickens are closely huddled together the oxygen soon becomes exhausted, and thus they are compelled to breathe the impure air over and over again. There are a great number of diseases that owe their origin to overcrowding. Many of these diseases are not immediately apparent, but the seeds are sown which ultimately assert themselves. If the cause of tuberculosis in hens were traced, not infrequently it would be found that inattention to this important matter was responsible for the trouble. So far as is known tuberculosis descends from one generation to another, and as the disease is not always apparent, birds so affected may be bred from. Hence the



**A boatload of 150 baskets of eggs on Soochow Creek, Shanghai, China.** (See page 370).

tax upon the ingenuity of the owner, since at no other time of the year has he so many birds of one kind or another to accommodate. The time is not yet for the disposal of the two year old hens; the breeding pens are not broken up; and in addition to large numbers of chickens, there is the general laying flock. Overcrowding in every direction must be discouraged—there is no greater evil to be fought against—and a word of warning at the present time may be the means of preventing some of the inevitable troubles that follow inattention to this important item in the management of chickens. Many of them have now attained an age when it is imperative that they shall have their sleeping quarters increased. This may mean a certain amount of trouble, and not unlikely some expense may attend this thinning out; yet the extra work, and possible outlay in more appliances, will soon repay itself in the enhanced value of the stock.

evils of overcrowding chickens have a far reaching effect.

The remedy that immediately suggests itself is, why not buy more appliances and thus obviate the danger? This advice is very easy to give, but not always easy to follow, since with the majority of industrial poultry keepers, money must be considered. If a man wishes to develop, more appliances must be obtained that are commensurate with the extent of his developments, but very often people develop so far as rearing more chickens is concerned, but do not develop in any other direction. If a man has space and accommodation for only a certain number of chickens, to attempt to rear more is a very foolish proceeding. The golden rule in chicken rearing is never to breed more than can be properly accommodated or than the land can safely carry.

To keep chickens growing is very often a somewhat difficult matter, especially when the season



is drawing to a close. This slowness is often the result of batch after batch of chickens being put upon the same piece of ground, from which the freshness is impaired by long occupancy. It is a wise proceeding to keep a section of the land for the later chickens. Even if both early and late hatched chickens have absolutely sweet and clean ground, it will invariably be found that the former are infinitely more rapid in their growth than those hatched six or seven weeks later. The late ones have the handicap of being placed upon ground that has been previously used, then indeed their growth will be slow and their condition poor. Whenever practicable the land should be divided up so that the latter have a better start.

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### THE EGGS-FOR-HATCHING TRADE.

**D**URING the present month many thousands of sittings of eggs will be distributed by rail and post throughout the kingdom, and to those who are contemplating embarking upon this branch of the poultry business for the first time, a few words of advice on the best methods of packing and dispatching eggs will no doubt prove useful. It is very annoying to the purchaser and equally so to the vendor when eggs are broken in transit. Whether the former may have invested the modest sum of five-shillings or the princely one of two guineas in a sitting of eggs, his language on opening the box with infinite care and uncovering its contents with visions of Palace winners in embryo, only to find a collection of broken and cracked eggs, will emulate the atmosphere on a summer's day both in warmth and colour.

Wherever possible, it is advisable to send eggs by rail, as they invariably reach their destination more quickly and in better condition than is the case when the parcel post is requisitioned. Admirable as are the arrangements of our parcel post service, it is hardly a suitable medium for the conveyance of eggs for hatching, and anyone who makes use of it for such a purpose need express no surprise if the eggs, however carefully they may be packed, arrive in a chaotic condition. In dispatching by rail and by post (although in both cases the travelling is done by passenger train) there is this essential difference, that in the former case the package, labelled with the nature of its contents, is plainly visible to the eye and may reasonably be expected to receive care in handling; in the latter case the box is packed indiscriminately in a hamper with a miscellaneous assortment of parcels, and therefore does not receive—nor can it be expected to receive—any special care. Anyone who has witnessed the manner in which these unwieldy hampers are bundled in and out of the luggage vans need seek no further for the cause of eggs being damaged when sent through the post. There are, however, certain obscure country places where there is no choice in the matter—the eggs must be sent by parcel post or not at all.

In many cases where eggs are sent by rail breakage is due to carelessness in packing, for if this is properly done nothing but gross carelessness and ill-usage on the part of the railway servants will cause the eggs to arrive in a damaged condition. Eggs for sitting should be packed in the divisional wood or cardboard boxes, which are easily obtainable from the appliance makers. Boxes of all kinds, shapes and dimensions, are used for the sake of cheapness, but such a penny wise and pound foolish policy is not to be advocated. It does not much matter whether wood or cardboard boxes are used, so long as a good, stout, well-made sample is obtained. I have used both with equally good results, though for very long journeys and in cold weather I prefer the former, as they afford more protection against frost.

A divisional box having been obtained, it may appear to the novice the simplest thing in the world to pack one egg in each compartment. Certainly, this is so, but the condition of the egg on arrival at its destination is largely dependent on the manner in which this packing is carried out. I find that returned infertiles generally arrive in a more or less damaged condition, and while it may be that the railway officials do not exercise so much care over a returned box as they do on its outward journey, I believe that in the majority of instances the breakages are due to the eggs not being packed in a proper manner. Hay, chaff, or coarse bran may be used for packing, but I generally use the latter. My method is to sprinkle a little bran in each compartment, so that the bottom of the box is well covered. Then wrap each egg carefully in a piece of soft paper and place it large end downwards in the box, taking care that it stands in the centre of its respective compartment and does not touch the wood. Pack bran firmly but carefully round the egg, so that it cannot move, fill the remaining space with the same material, and the lid can then be secured. The main points to be observed are: (1) That the eggs are firm and cannot be shaken about, (2) That they do not touch the sides of the box, special care being taken that the lid does not rest on the eggs. The lid of the box may be fastened on with cord or small screws, but on no account should it be nailed, as the jarring caused by this process would have a deleterious effect on the germs and probably spoil the hatch. Whatever method of fastening may be adopted, it is advisable to tie the box up with stout cord or string, not only as an additional security, but in order to facilitate handling during the journey.

One other precaution should be taken. The box must be labelled in large letters and in a prominent place, with some indication of the nature of its contents. Most egg boxes are printed in bold letters "Eggs with care," but it is advisable for anyone who dispatches sittings in any quantity to affix a specially-printed label bearing these words, or others of similar intent.



## WITH THE EGG TRAIN IN NORTH WALES.

By THE EDITOR.

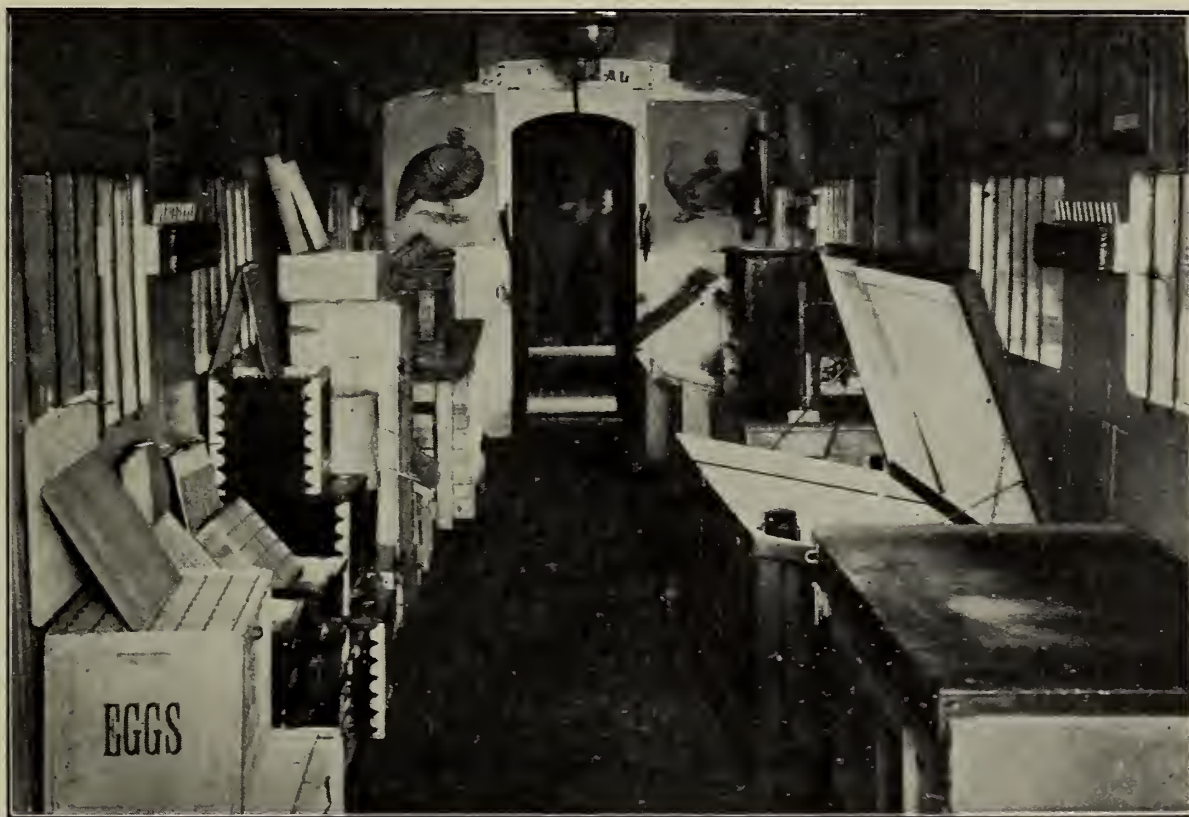
IT is just three years ago since the first egg and poultry demonstration train was taken through South Wales. It was a novel departure in educational organisation, and at the time there was considerable comment as to its probable effect in the promotion of the poultry industry. Events during the period that has elapsed since the running of that train have demonstrated the fact that as a means of education in production and organisation of marketing in the more outlying districts, the experiment then made was fully justified.

The second train is again journeying through Wales, but this time traversing the Northern districts. The promoters of the scheme are the Agricultural Organisation Society and the National

departure, however, for an hour and a half the vans were on view for inspection by the large and influential company that had been invited.

Amongst those on the station to see the start were the Marchioness of Salisbury, Sir Sidney and Lady Olivier, Secretary of the Board of Agriculture, The Lord Channing, Charles Bathurst, M.P., Mrs. Wilkins, Sir Frank Ree, General Manager of the L. & N.W. Railway, Mr. and Mrs. J. Nugent Harris, Mrs. Pease, Mr. Rupert Ellis, Mr. Chiappiani, Trades Commissioner for Queensland, Major Glyn, D.S.O., and Mr. Algernon Towner, C.B.

During the run to Chester—where we became a special—we had a good opportunity of inspecting the exhibition shown in the vans, and a brief



**THE 1913 EGG TRAIN.**

Shewing one end of the demonstration compartment.

Poultry Organisation Society, and they are enabled to conduct this tour by favour of the L. & N.W.R. Co., and the Cambrian Rly. Co.

The demonstration train is running as a special, and is not, as was the case three years ago, attached daily to the ordinary trains running from town to town. The train itself consists of two 45ft. luggage vans, and a dining car, the last for the convenience of the staff and the pressmen accompanying the party.

A start was made on the 23rd April from Euston, by the 12.10 p.m. Liverpool train. Prior to the

description will no doubt prove interesting.

On entering the first car one was confronted by a large array of poultry appliances known to the majority of poultry keepers, but unknown to the hen wife in the rural districts of North Wales. Wherever possible models have been used, since room is naturally at a premium. First of all there are models of houses of different makes, built on a scale of 3 inches to the foot. This is a very good size, for although not unduly large, they are sufficiently big to enable their chief points and advantages to be noted. A number of the best makers have



had these specially constructed, and we noticed some very attractive ones by Messrs. Meech, and Tamlin.

Hatching and rearing are dealt with, and for this purpose a Hearson incubator and various brooders are shown. Such makers as Messrs. Meech, Miller, and Hearsons, have supplied their machines.

Seeing that the object of the train is largely to improve the marketing of produce, a big display of commercial egg boxes is made. Although the boxes made by Marshall, of Aberdeen, and Robinson's Patents, Ltd., and others are not similar to those in which continental eggs are packed, it is pointed out that foreign cases are not required here for the shorter journey from the point of production to the market. Day-old chicken boxes in wood and cardboard are also on view.

The last exhibit in the first car is connected with the preparation of table poultry. A crammer, cages, and a shaping board make up the appliances demonstrating this branch of the industry.

The walls of the car are decorated by a fine series of enlarged photographs depicting housing and rearing, and in addition a number showing the development of the chicken, which have been specially prepared by Mr. Charles Hearson. A case of marking rings by Messrs. Hill & Co., of Reading, and samples of wire netting by David & Co., Cardiff, make an interesting display.

The second car is devoted to exhibits of eggs and poultry for market, and to the giving of demonstrations in grading and testing eggs. Specimen eggs from six or seven foreign countries, packed in half cases (720 eggs), are shown, in addition to which there are a number of boxes of the British-produced article. The main object of this display is to indicate to our producers what they have to meet in competition with foreign poultry keepers, and incidentally to show the cases employed. In this country, however, returnable boxes over the shorter distances are preferable to other kinds. This is a striking display, and the importance of size is further illustrated, not only by enlargements of the photographs of eggs—which first appeared in the ILLUSTRATED POULTRY RECORD—but also in a clever series of wire baskets containing eggs. There are six of these, and of such size that each holds exactly sixty ( $\frac{1}{2}$  gt. hd.) 18lbs eggs, with which the first is filled. The remainder contain sixty eggs weighing respectively 17, 16, 15, 14, and 13lbs. to the ten dozen or great hundred. The difference in the fullness of the baskets demonstrates in a novel fashion exactly what size means.

There is also a good show of table poultry, indicating the various classes and the different methods of tying down for market. As these will not last the whole trip—until 6th May—fresh supplies are forwarded at intervals from London. The discarded birds are sampled by the company in the dining car en route.

The most important feature of this car—and the one that excites the most interest at each centre at

which we make a halt—is the egg testing room. A section of the van has been partitioned off by the Railway Company for this purpose. This room is capable of accommodating from thirty to forty persons, and the queue awaiting their turn reminds me almost of the disputed Palladium audiences waiting for admittance.

Various kinds of testers are shown here, for some of which the electric light is used. One or two are specially designed for rapid work when a large quantity have to be handled. An interesting form is a copy of a Dutch machine, though only  $\frac{1}{3}$  in size. This is circular in shape and divided into compartments, each one holding thirty eggs. The whole revolves, and when tested the eggs are passed from the dark room and packed by those outside. This is a system which, if effective, will simplify the work enormously. Mr. Verney Carter and his Welsh speaking assistant, Mr. David Thomas, are having a busy time in this department. A considerable supply of eggs in various stages of decomposition and deterioration have been secured, and Mr. Carter is thus able to point out the appearance of such eggs through the shell.

The staff number seven all told, namely: Mr. Edward Brown, F.L.S., Director, assisted by Mr. Walter Williams, organiser for Wales for the A.O.S., Mr. Verney Carter, acting as chief demonstrator, aided by Mr. David Thomas, and by Messrs. F. H. Ferris, E. W. Jones and S. B. Myer. The L. & N.W. Railway Co. is represented by Mr. Finberg from the office of the superintendent of the line at Euston.

In addition Sir James Wilson, K.C.S.I., Professor Bryner Jones and Mr. P. G. Dallinger have been delegated by the Board of Agriculture to accompany the train for a part or the whole of the tour. Aberystwyth and Bangor Colleges have representatives whilst travelling through their respective spheres of influence, together with representatives from two or three County Councils. These with the press make a large party.

The itinerary of the tour was published in the April number of the ILLUSTRATED POULTRY RECORD, and, therefore, it is unnecessary to reprint it here. The plan adopted is that as soon as the train reaches a centre, it is shunted into a siding and the vans opened for inspection and demonstration, and at some time during the stay a meeting is held. This usually takes place in the station yard, but occasionally in a Hall. At the meeting, the work of poultry keeping is advocated and marketing by co-operative methods is also dealt with. Speeches are delivered in English and Welsh.

A series of about ten leaflets—in book form—is being distributed and it is expected that about 60,000 will be used before the completion of the tour. A few of these leaflets are published in Welsh.

We propose to give in our next issue a further description of the tour, commenting on any outstanding features encountered at the different centres.



## THE SPECIALIST CLUBS' YEAR BOOKS.

By WILLIAM W. BROOMHEAD.

**B**RIEF reviews of further year books which I have received are given below. Up to the time of going to press there are still some to come in, and among them there is at least one which was taken in hand in December last!

**THE VARIETY ORPINGTON CLUB:** Hon. Secretary and Treasurer, Mr. Alfred W. Barrett, Rosemount, Derry Downs, St. Mary Cray, Kent. Ever since its inception in 1903 this club has published a year book; but so far it has not got out of the ordinary rut. It is a pity, since the three varieties for which the club caters, viz., the White, the Jubilee, and the Spangled, would, I feel sure, benefit by this mild form of boom. At any rate it never does any harm to keep one's favourites well to the front, and there are sufficient staunch supporters of the V.O.C. to help forward such a book in the form of advertisements. However, it is pleasing to be able to report that the club can record another very successful season's working. There was a good profit on the Club Show at the Palace, but the guarantee of the Spangled classes at the Dairy Show resulted in the club dropping £3. Despite that, the sum in hand at the beginning of this year was £46 11s. 4d., while the total membership stood at 77, altogether a satisfactory state of affairs.

**THE WHITE WYANDOTTE CLUB:** Hon. Secretary and Treasurer, Mr. J. Stephen Hicks, Bottisham House, near Cambridge. One looks for something good in the year book of the White Wyandotte Club. It was, I believe, the first of the specialist bodies to publish its doings in artistic form, and since it began it has never looked back. The present issue—price 6d., post free to non-members—is well up to its predecessors in daintiness—art paper throughout, clear type, and well-printed illustrations. Among the reading matter, in addition to the hon. secretary's report and the presidential letter, there is a report on the Club Show at York by Mr. C. N. Goode. Mr. J. Carlton Hunting has something to say on the minor points—comb, eyes, lobes, wings, shanks, and toes—of exhibition specimens, while Mr. Wilfrid H. G. Ewart writes in his usual entertaining manner on "Behind the Scenes." The most sensible article on the international standard question that I have ever read—and I have followed the controversy rather closely—is that by Mr. W. M. Elkington, entitled "An International Ideal," and breeders of White Wyandottes will have something to think over when they have perused it. The club is ever looking for some new feature to keep members together, and to create new members, and its "Visiting" Cup, instituted on the lines of the Poultry Club's Breed Cups, is a move in the right direction. The financial state with £23 16s. 10d. in hand is quite sound, while with a membership of 165 the club can be said to be going particularly strong.

**THE INDIAN GAME CLUB:** Hon. Secretary and Treasurer, Dr. J. K. Goodall, Brimington, Chester-

field. There is nothing in the annual report—the club does not give its publication the title of Year Book—to call for special comment. Non-members can obtain a copy for 6d., but there is not likely to be a great run on the book. The club continues to make progress, and from the balance sheet I see that there has been a profit on the year's working, while last year's club show at the Palace resulted in a net profit to the club of £3 17s. The Indian Game Bantam does not appear to get the support it merits, and the president and hon. secretary do not fail to comment on this. The club holds some very valuable challenge cups, and with an increasing membership it augurs well for the future of the breed.

**THE CAMPINE CLUB:** Hon. Secretary and Treasurer, Rev. E. Lewis Jones, Heyope Rectory, Knighton, Radnorshire. Things are evidently looking up in the Campine Club, despite the recent disturbance in certain quarters. The year book is right up-to-date, the membership roll numbers 76, and the balance in hand is £5 2s., as against £1 5s. brought forward from the previous year. Among the interesting contributions are "Passing Thoughts," by Mr. George Scott—the "Red" man, with his "six-feet-of-good-solid-earth" expression. However, we all have our weaknesses. The Thoughts make excellent reading, and Mr. Scott is not given to mincing matters. The subjects he tackles are the two types of Campine so much discussed of late, and the question of judging; and he handles them in a masterly style. Another interesting item in the year book is a report of "Campines at Madison Square Gardens, New York," by Mr. F. S. Platt, and with some delicious American expressions in it. Such reports, by the way, would liven our weeklies up in the season! The price of the year book is twopence, post free, and the issue should be sold out at once.

**THE LEGHORN, PLYMOUTH ROCK, AND ANDALUSIAN CLUB:** Hon. Secretary and Treasurer, Mr. L. C. Verrey, The Warren, Oxshott, Surrey. The club is one of the very oldest in the Fancy, but it has not come into line with its year book. Far from it, in fact, since the publication does not include the standards of excellence, which are issued as separate pamphlets—one for each breed—at fourpence, post free. From the report I see that "it has not been quite as successful a year as one would have liked," but considering the heavy loss the club sustained over its annual show at York—£26—the financial position is not so bad, while the present membership stands at 163. However, Mr. Verrey has again taken up the secretarial reins, and with such a well-known fancier in office, the club, I doubt not, will soon get back into its old position as one of the most influential in the Fancy.

**THE BLACK ORPINGTON CLUB:** Hon. Secretary and Treasurer, Mr. W. M. Bell, St. Leonards Poultry Farm, Ringwood, Hants. Things have not been



over rosy in Black Orpington circles these past few years, but they are looking up now. During 1912 the club was handicapped at the commencement by outstanding liabilities, but all outstanding debts have been wiped out, and 1913 was started with a balance in hand. It was small, certainly; nevertheless, among items of expenditure there are upwards of £35 paid to settle expenses incurred in previous years, of which £22 appear as legal. However, the year book is a very dainty publication and a decided improvement on anything the club has ever issued in this direction. There are some excellent articles, and among them hints by Mr. J. C. Shanks on mating for colour, size, and type, and instructions by Mr. Bell on the preparation for, and exhibition of Blacks. There are four half-tone illustrations of well-known birds, but not one of them does justice to the sitter. The photographer has snapped them at unhappy moments. Someday, maybe we will have in this country camera artists such as they can boast in America, men like Sewell and Schilling, fanciers, black-and-white artists, and camera experts of the best.

**THE SUSSEX POULTRY CLUB:** Hon. Secretary, Mr. S. C. Sharpe, Brookside, Ringmer, Lewes, Sussex. The club goes steadily on its way and continues to make new friends. The membership list is a particularly long one—there are almost 270 names on it—while the balance in hand is £22 3s. 4d., signs of success. The officials of the club are workers, and none more so than the worthy hon. secretary. In addition to the standards and the usual items, the year book contains some useful information concerning the three varieties for which the club caters, the Speckled, the Light, and the Red. No doubt about it, the breed is forging ahead in popularity, but it should have an even greater vogue than it enjoys at present, and particularly in the Midlands and the North. However, it is moving in the right direction.

**THE POULTRY CLUB;** Hon. Secretary and Treasurer, Mr. T. Threlford, 2, St. Luke's Square, Victoria Docks, London, E. Of this year book it might truthfully be remarked The least said the soonest mended. It gives one the idea of having been rushed through, and its shortcomings are too numerous to mention. Interesting articles, which were a feature of former issues, have been dropped, and the only new item is a list of judges, which is, well, not correct. There are a few notes on the president, with a photograph of that official nursing a lion cub. Wild beasts, it may be added, are Mr. Drake's greatest hobby, and he has the largest private collection in the United Kingdom of wild animals and birds. It is a disappointing issue is the 1913 P.C. year book.

**THE BRITISH RHODE ISLAND RED CLUB:** Hon. Secretary and Treasurer, Mr. George Scott, The Windmill, Pudsey, Yorkshire. "The 'Red' Breeders Annual," for such is the title of this club's year book, is unquestionably the finest publication of its kind ever put before the Fancy; and although non-members will have to pay 9d. for a copy, post

free, it is cheap at the price. The B.R.I.R. club has always gone one better than other specialist clubs in this direction, but this year it has excelled former issues. It is a Scott book in more senses than one. He it is who has edited the work, while of the seventeen articles and reviews it contains no less than eight that are solely from his pen, and in addition he contributed half of "The Beginner's Guide," and wrote the introductory note to "How I achieved Success." Truly then has the club a worker in its hon. secretary, and there are few, if any, bodies of a like nature who can boast of such a one. The reviews of noted yards are a decided feature, and the editor has struck a note of novelty in the series. Of other contributors to the year book are the Rev. F. S. Banner, B.A., "On the Acquiring and Preservation of a Good Strain"; Mr. F. E. Mason, "The Colour Question"; Mrs. A. J. Jones, "The Little Red Hen"; Mrs. Higginbottom on management and rearing and preparing for exhibition, in "The Beginner's Guide"; Mr. T. C. Solomon, "Some Impressions and Opinions"; Mrs. W. B. Goode, Rev. F. S. Banner, Mr. W. Roger Smith, and Mr. T. C. Solomon, "How I Achieved Success." The balance Sheet shows a sum of £16 8s. 4d. in hand on January 1st, 1913, while the membership has risen from 54 in 1910 to 205 at the beginning of this year. The illustrations are among the best I have ever seen, and altogether "The 'Red' Breeders' Annual" is a remarkable production.

**THE PARTRIDGE WYANDOTTE CLUB:** Hon. Secretary and Treasurer, Mr. W. M. Elkington, Ladye's Hill, Kenilworth. The year book does not strike me as containing quite as many pages as usual; nevertheless, good as have been its predecessors, the present, in my opinion, is unquestionably the best of them all. Among the most interesting of its contents is a double-page plate of features reproduced from some "line" ones—actually pulled and not moulted—from well-known prize-winning hens; and since the plate is accompanied by descriptive text, it cannot fail to be of untold value to the novice. Side by side with the features from English birds is one taken from a leading American winner. This is an excellent object lesson. The American pencilling in comparison is decidedly coarse and broad, and nearer the marking of the present day Partridge Cochin as exhibited in England. Clear and fine pencilling is an outstanding feature in the best hens on this side of the Atlantic. In addition, the year book contains the new standard which was drawn up by the club last winter, and particulars of a new points competition; and altogether it is well worth the price asked, threepence, post free.

**THE BUFF ORPINGTON CLUB:** Hon. Secretary and Treasurer, Mr. W. J. Golding, Westwood Farm, The Weald, Kent. Whatever has been said of the Orpington Clubs' year books in the past—and until last season, at any rate, they did not strike one as anything special—the same must not be repeated! The B.O.C. has set the fashion this year, not only



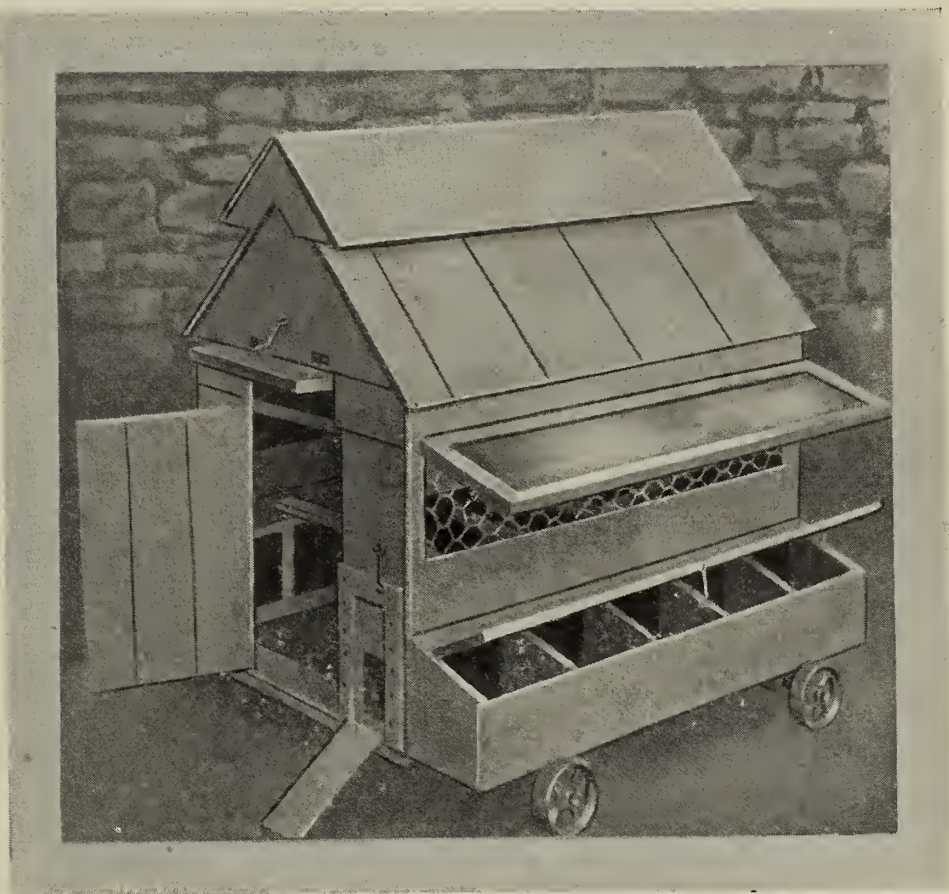
for Orpington Clubs but for others. The cover is the most artistic and at the same time the most instructive that has ever graced a publication of this nature. The front of it depicts a champion Buff cock in its natural colours, and it is from an actual photograph by the new three-colour process, and without any touching up of the bird's feathers or shape. There is, perhaps, the faintest tinge of so-called "red" on the hackles and wings, but in my opinion it is no detriment; and the photographer as well as the colour printer is to be congratulated on the excellence of the production. On the back of this cover are shown half-a-dozen features, taken from the tail, the hackles, the wing, and the breast, and nothing finer in colour printing has been done. In the book itself there is much of interest, and among the contributors are Messrs. Frank Bloomer and Edward A. Cass. Miss Carey's "The Fancy, 2348 B.C. to A.D. 1913" is set out in verse; but "The Club's Poet" almost deserves muzzling for his—or maybe it is her—contribution entitled "The Buff Fancier's Alphabet." However, some of the members have been hit off to a nicety, so the poet is forgiven! I cannot say that the black-and-white illustrations are altogether pleasing. The first is of Miss L. L. Patourel's challenge cup hen, but it is from an oil-painting and it possesses certain blemishes, not the least of which are the decided bow legs. Mr. W. J. Golding's challenge cup cockerel, too, has not been well posed before the camera, but Mr. M. Dalton Cawap's challenge cup pullet is ideal in every way, the picture being the production of an artist. The club is in a particularly healthy state. There are almost 160 names on the membership list, while the balance to the club's credit—despite a slight increase of expenditure over receipts on the year's working—is £96/4/5.

#### Eggs for British Columbia.

Mr and Mrs. P. T. Pyne, Ravenscar, Yorkshire, the well-known breeders, exhibitors, and exporters of Pyne's Recording Nest Strains of fowls, have just shipped another consignment of their special eggs to British Columbia to the Secretary of the Citizens' League of Ladysmith. The Secretary writes, "The egg and poultry business in British Columbia is profitable, but so many do not understand the value of having good breeds. I intend to get them educated, so that they may send their orders to you for good stock. I need not advise you as to packing."

#### A MODEL POULTRY HOUSE.

At the elementary school, Lanlivery, Lostwithiel, Cornwall, a great deal of attention is devoted to practical work, and among other things of note is the building of suitable poultry houses. The model poultry house, of which we print a photograph, is erected from a cube sugar box. With this kind of material it was impossible to build it to an exact scale. The measurements are; Length 2 feet; breath (including nest boxes) 2 feet; height from ground to ridge 2 feet 3 inches. At  $\frac{1}{4}$  scale this would be rather too wide for an ordinary gateway. The double ridge with the ventilator over the door provides good ventilation. Four



The Model Poultry House described on this page.

[Copyright.]

boys—average age  $12\frac{3}{4}$  years—built the model, all parts of which are made from odd pieces of wood. The tools used were a hammer, saw, pinchers, screwdriver, nails, pocket knife. It would be impracticable to use chisels or planes, as the wood often contains small hidden nails.

Another larger model poultry house is made from boxes to scale and in sections. These models form a part of a large exhibit being prepared at the school for the Educational Section of the Bath and West of England Show. About a dozen poultry models and appliances will be on view.



## NEW POULTRY BUILDING AT CORNELL DEDICATED.

[The following summary of the proceedings at the opening of the New Poultry Building at Cornell University (of which illustrations were given in the issue of the ILLUSTRATED POULTRY RECORD for February, 1912) is taken from *Farm Poultry*, to which we acknowledge our indebtedness.

EDITOR I.P.R.]

WEDNESDAY, February 12th, 1913, was a red letter day in American poultry culture. The event of the day was the dedication at the New York State College of Agriculture at Cornell University of the first permanent building for a department of Poultry Husbandry. Heretofore all poultry departments at such institutions have been housed either with other departments or in temporary structures usually of wood and roughly finished. The fine three story brick building just completed at Cornell gives its poultry department a building and equipment on a par with those of the other departments of the College of Agriculture, and stands as an example for other institutions.

The dedication exercises were of a somewhat informal character because the necessities of the situation brought the building into use in part before it was completed, and under the circumstances it seemed most appropriate to make them very simple. The plan adopted was to take an afternoon and evening session midway in the program of Farmers' Week, for very short addresses from many persons representing different classes and shades of interest of education in poultry culture.

The special exercises began with the singing of the Cornell song "Alma Mater," by the Agricultural College Glee Club, an invocation by Rev. E. A. George, of Ithaca, and an address by Director L. H. Bailey. Brief as were the remarks of the various speakers, they must be greatly condensed in a report, for many little speeches make a long program.

Dean Bailey began by saying: "We dedicate this building to all good works." He referred to the event as a remarkable occasion,—a great occasion for the poultry interests of the state, an auspicious occasion for Cornell, carrying one step farther the dream of the founder of a university where anyone could be educated for any purpose. Ten or fifteen years ago such a department was not contemplated. He counted it a great thing that a department of poultry husbandry could be co-ordinated with the departments of a university devoted to all the arts and sciences. He referred to the fact that methods of instruction in this subject were still in an experimental stage. The instructors were there to train minds by means of this group of subjects. Only after trial of many methods would it be possible to determine how much of the training should be mental and how much hand work. Many students have begun at the wrong end of the problem. Young men and young women ought to know something before they go to college. The time was coming when the student in this course would

be required to take at least a year of work with poultry on a farm before being admitted to Cornell. But young persons entering needed more preparation than simply practical acquaintance with the care of poultry. They should also know the English language and whatever else fitted them to study the subject in its various stages.

Speaking for "The Feathered Investigator" Dr. P. B. Hadley, of the Rhode Island Experiment Station, told how investigations relating to poultry had had a great deal to do with medical work. Pasteur's discoveries grew out of his investigations of fowl cholera. These formed the basis for all his later work dealing with the prevention of disease by the use of immune serums. One of the mysterious problems in medical science is the cause and origin of cancer. The study at the Rockefeller Institute in New York City of the ordinary tumors found sometimes upon fowls, was leading to some important discoveries in relation to cancer.

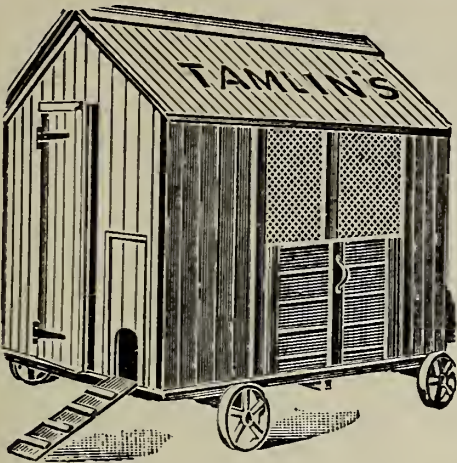
For the student body Mr. P. R. Guldin spoke of "The Regular and Special Student in Poultry Husbandry," and Mrs. Beulah H. Tompers, of "The Winter Course Poultry Students." Mr. Gulden said that at Cornell a student could take "as much or as little as he wants," and gave a brief description of methods. Mrs. Tomper's remarks related chiefly to the attitude between the short course students and Prof. Rice, to whom she paid a fitting tribute full of feeling appropriately mixed with humor.

J. H. Robinson was given the subject "Poultry Literature," which meant specifically poultry books. His theme was the marked influence of poultry education in raising the standards of this class of literature. Mr. T. F. McGrew, in charge of the poultry work of the International Correspondence School, spoke on "Vocational Education by Correspondence," which he said had been in vogue ever since the first letter was written, but had only recently been developed along organized lines. Mr. Harry Lamon, of the Bureau of Animal Industry of the United States Department of Agriculture, spoke for the branch of the government with which he is connected and gave some very interesting statistics from the recent census.

Rev. W. Brown, Pastor of the First M. E. Church of Ithaca, spoke for "The Minister," telling how an interest in poultry furnished a diversion from arduous professional labours. The preacher, he said, usually took up poultry culture in this way, not to make a business of it. "Few ministers enter the poultry business, but lots of chickens enter the ministry."

Mr. H. A. McAleer, of the Bureau of Chemistry





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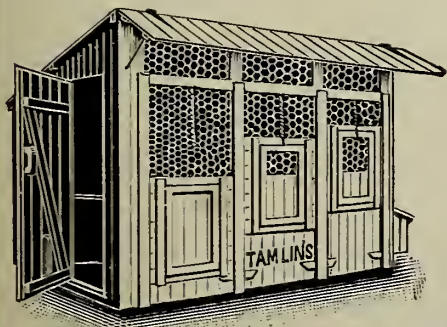
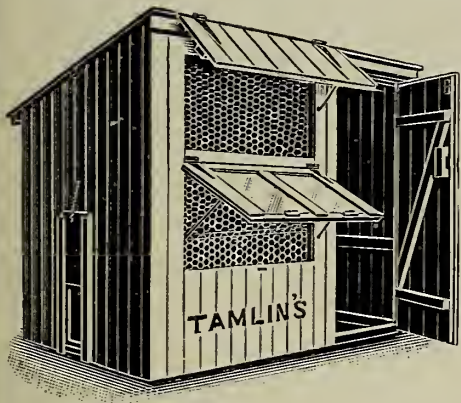
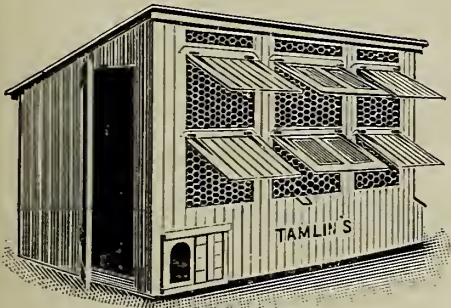
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of the United States Department of Agriculture, told of the work that bureau was doing to prevent the great losses of eggs and poultry in transportation. He said that it was easy to find out where the shipper errs, but not easy to get information to him. The most effective work is done by personal contact with the individual packer. It is also found that the best place to work for the conservation of poultry products is in the field where the supplies are produced, not at the great receiving centres. He spoke particularly of the egg breaking work, done to save cracked eggs. Many of the plants for this work are now as sanitary as the operating room in a hospital.

Hon. C. J. Huson, Commissioner of Agriculture of the State of New York who was to have represented that department, was prevented by illness from being present. His place was filled by Mr. Edward Van Alstyne, in charge of Farmers' Institute work in the state. "This gathering and this building," said he, "represent united effort." After a few remarks about the laws relating to agriculture he said that he felt that on this occasion he ought to confess a mistake he had made years ago. When the question of poultry instruction at Cornell came up and Prof. Rice was invited to take charge of it, he was one of the friends of whom Mr. Rice had asked advice. He had advised Mr. Rice not to accept it. He was glad to-day that Mr. Rice had not followed his advice.

Mr. Herbert McLallen, of Trumansburg, N.Y., spoke on "Co-operative Buying and Selling as a Promising Field for Association Effort." He briefly described what the poultry keepers and fanciers of Trumansburg and the vicinity had been doing along this line since they began with thirty members, five years ago. The association does not handle a very large volume of business, but it is steadily growing and now has one hundred and thirty members and is beginning to develop.

Dr. Lot D. Sutherland, of Canandaigua, N.Y., read a paper on "The Poultry Show Manager." The following papers on the afternoon programme were not read, but I presume will appear in an official account of the meeting: Mr. Grant M. Curtis, Buffalo, N. Y., "The Poultry Press,;" Dr. E. M. Santee, Cortland, N. Y., "The Poultry Institute Lecturer,;" Mr. Reese V. Hicks, Topeka, Kans., "The American Poultry Association,;" Edward Brown, London, Eng., "International Association of Instructors and Investigators,;" Prof. Horace Atwood, West Virginia Experiment Station, "The American Association of Instructors and Investigators."

## THE POULTRY CLUB.

The Monthly Meeting of the Council was held on Friday, the 11th April, at the London Chamber of Commerce. There were present Mr. L. C. Verrey in the

chair, Dr. S. E. Dunkin, Captain R. R. Allen, The Rev T. W. Sturges, Miss S. Carey, and Messrs. C. Tyrwhitt-Drake, W. Clarke, W. Rice, S. W. Thomas, R. Fletcher Hearnshaw, J. Carlton Hunting, P. H. Bayliss, W. J. Golding, H. Corrie, Frank Bloomer, A. Caith, and T. Threlford, Hon. Sec.

Mr. Richard Watson wrote expressing regret that an important engagement prevented his attending. He referred to the great loss the fancy had sustained by the death of Mr. Wallis, and expressed the hope that some memorial would be raised to his memory.

Mr. Verrey spoke in feeling terms and referred to the many years he had been associated with Mr. Wallis and concluded by moving the following resolution:—

"This Council expresses its sorrow at the untimely death of their esteemed colleague, Mr. H. Wallis, J.P., whose services for so many years, both to the Poultry Club and the Fancy, have been of such inestimable value, and their deep sympathy with Mrs. Wallis and family in their great bereavement."

The Rev. T. S. Sturges, and Messrs. G. Tyrwhitt-Drake, P. H. Bayliss, S. W. Thomas, W. Clarke, F. Bloomer and others spoke of his high character and willingness at all times to give a helping hand to beginners and others not so successful as himself in the Fancy.

The resolution was carried.

It was then decided that a Committee consisting of The Rev. T. W. Sturges, Dr. S. E. Dunkin, Captain R. R. Allen and Messrs. Richard Watson, L. C. Verrey, S. W. Thomas, G. Tyrwhitt-Drake, John Horn, P. H. Bayliss, W. Clarke, and T. Threlford be appointed to raise a memorial to perpetuate the memory of Mr. Wallis.

The minutes of the February Council Meeting were read and confirmed.

The following new members were duly elected:—

*Recommended by the Cornwall Branch—*

Mr. E. Baunac, St. Mawes, Cornwall.

*Recommended by the Derbyshire Branch—*

Mrs. Ernest Ayre, Oakdene, Mickleover, Derby.

*Recommended by the Gloucestershire Branch—*

Mr. A. E. Helmsley-Thompson, Cleeve Cottage, Chalford Hill, Stroud.

*Recommended by the Lincolnshire Branch—*

Mr. G. Cedric Chapman, Stallingboro' Utility Poultry Farm, The Limes, Stallingboro'.

*Recommended by the Middlesex Branch—*

Mr. William J. Coxhead, 105, Maidstone Road, New Southgate, N.

Mr. Jennings Scott McComb, Lily Hill, Bracknell, Berks.

Mr. P. McIntyre, Home Farm, Philorth, Fraserburgh.  
Mr. William Holton, Pantypuddy, Abertillery, Mon.  
Mr. Herbert William McComas, M.A., Bwlch Bach, Dolwyddelan, North Wales.

The following Societies were duly associated:—

The Ealing and Hanwell and District Fanciers' Society, Hon. Sec., Mr. Rowland Bamber, 78, Whitestile Road, Brentford.

The St. Blazey and District Fur and Feather Society, Hon. Sec., Mr. Austen R. Davis, Tregarth, St. Blazey.



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The following Shows announced to be held under Club Rules were granted Specials:—Mid Kent Agricultural Association, Burton Joyce, Calverton, Lowdham, Radcliffe on Trent, Nottingham Bantam Show, Collingham and Wem and District.

Correspondence. Various letters were read and left in the hands of the Secretary to deal with.

Carmarthen Show, 1909. It was decided on the recommendation of the South Wales Branch to place the Carmarthen Show as held under the officials in 1909 on the Black List.

Mr. L. C. Verrey was unanimously elected Vice-Chairman of the Council, and authorised to countersign cheques.

At this stage of the meeting Mr. Verrey vacated the chair and the President Mr. C. Tyrwhitt-Drake presided whilst the complaint from the Leghorn, Plymouth Rock and Andalusian Club was considered. This referred to the refusal of Mr. A. Widd to return a Challenge Trophy when requested to do so by the Committee of the L.P.R. and A. Club. After hearing the evidence the Council decided to support the action of the L.P.R. and A. Club and call upon Mr. Widd to return the cup.

The next meeting of the Council will be held at the London Chamber of Commerce, Oxford Court, Cannon Street, E.C., on May 9th, at 2 p.m. All prospective members names must reach the Hon. Sec. on or before May 1st, and if residing in a County having a Branch, through the Secretary of same. T. Threlford, Hon. Sec. and Treasurer, 2, St. Luke's Square, Victoria Docks, London, E.

## THE TABLE POULTRY CLUB GROWING TESTS.

One of the principal objects for which the Table Poultry Club was established was the carrying out of *growing tests* to ascertain what were the most suitable breeds of fowls and the cost of rearing. A sub-committee was appointed, consisting of the chairman, vice-chairman, and hon. secretary.

The breeds selected by the committee were ten pure breeds—the four varieties of Sussex (light, speckled, brown and red) two breeds of Orpingtons (buff and white), Indian Game, Dorking, Faverolles and Rhode Island Reds.

The Saunderton Land Company offered to provide the necessary ground, and Mr. Randolph Mecchi the appliances, consisting of ten breeding-houses and runs, incubators, foster-mothers and brooder-houses, free of cost. A firm of millers offered to provide what foods would be required, to be paid for when the birds were sold, and different members of the committee offered to supply pens of birds of the selected breeds.

Owing to the season being too far advanced before the trials could be started, and other circumstances, the growing tests on the scale proposed had to be abandoned until next season.

In the meantime, arrangements have been made for carrying out some trials on a more moderate scale on co-operative principles. At the request of the sub-committee, Miss Garrett, of Sutton, filled a 100-egg incubator with eggs from eight different breeds of table fowls, consisting of three pure breeds—Buff Orpingtons, Rhode Island Reds, and White Wyandottes—and three cross-breeds—Indian Game cockerel mated to Buff Orpington-Faverolles, and White Orpington hens. In addition to these, Mr. Chas. Moon sent a sitting of his special cross-breeds, Malines mated with Faverolles-Buff Orpington hens. Mr. C. Willis-Fleming sent a sitting of Faverolles-Sussex.

The result of the hatching was seventy-seven chicks, comprising seventeen of Mr. Moon's, thirteen of Mr. Fleming's, (some of this lot of eggs were broken in transit), eighteen Rhode Island Reds, nine Buff Orpingtons, twenty of Miss Garrett's cross-breeds.—Total 77. Of these, Miss Garrett, with the assistance of Miss

Taylor, has put into a foster-mother twelve of Mr. Moon's cross, six of Mr. Fleming's, six White Wyandottes, six Buff Orpingtons, twelve of the mixed cross-breeds, and six White Wyandottes hatched the same time, making forty-eight in all.

These will all be fed alike on a menu of cooked food, chicken-meal, and dry chick feed. The weights of the food consumed and the weights of the chickens will be taken periodically.

It is intended that a couple from each of the eight lots shall be sent to the Women's Agricultural and Horticultural International Union Show, to be held in the Botanic Gardens, Regent's Park, on July 10th, when an opportunity will be given of comparing the chickens in their feathers. During the afternoon a demonstration will be given in killing, plucking and trussing, of which these sixteen chickens will provide the birds to be operated upon.

Some of the batch will be grown on until September, when they will be entered at the Hayward's Heath Show, and possibly a few may be seen at the club show, which it is hoped will be held in conjunction with the International Show at the Crystal Palace in November.

WM. C. SLAUGHTER, *Hon. Sec.*

## The Utility Poultry Club's Twelve Months Laying Competition, 1912—1913.

This Competition has now run for six months, and the report of Mr. F. W. Rhodes, who is managing the competition at the Harper Adams Agricultural College, Newport, Salop, makes interesting reading.

Pen 86, Buff Rocks, still keeps its lead with a total score of 560 eggs (value £3 8s. 4½d.), but they are closely followed by Pen 60, White Wyandottes, with a total score of 577 eggs (value £3 5s. 8d.) Pens 32 and 45, both White Wyandottes, hold third and fourth positions, and then the first of the light breeds, Pen 24, Black Leghorns, holds a place with a score of 506 eggs (value £2 16s. 1½d.)

It will be interesting to notice if the light breeds will be able to make up during the summer months the leeway they have lost through laying fewer eggs during the winter months, when eggs were of greater value. Broodiness is sure to handicap somewhat the heavy breeds, but so far only four pens of light breeds are among the first twenty pens in the competition.

The month's totals show some interesting figures, the leading pen for the month being pen 62, Silver Laced Wyandottes, which have laid no less than 152 eggs (value 11/2½) during the month (28 days). Two of the birds in this pen have laid every day, and the other four birds have scores of 27, 25, 23, and 21 eggs respectively. This pen only holds, however, the 87th place in the competition, as they did badly in the previous months.

The difference in the value of eggs laid between the first and last pens is as much as £2 7s. 9½d., a pen of White Wyandottes being last on the list, showing the different capacities of strains of the same breed. The competition does not end until next October, so there is plenty of opportunity for those who have not already done so to visit the competition.

The position of the leading pens is as follows:—

Position.	Pen No.	Breed.	Total Eggs during 6 months.	Total Value.
1.	86.	Buff Rocks.	560	3 8 4½
2.	60.	White Wyandottes.	577	3 5 8
3.	32.	White Wyandottes.	544	2 19 3
4.	45.	White Wyandottes.	515	2 16 4
5.	24.	Black Leghorns.	506	2 16 1½
6.	40.	White Wyandottes.	505	2 15 5½
7.	80.	Buff Orpingtons.	482	2 13 5
8.	100.	Red Sussex.	460	2 12 7

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## An interesting Directory.

From Mr. J. Marsden Chandler we have received a copy of the Directory of Exhibitors and Breeders of Plymouth Rocks in the British Isles for 1913. The book contains, in addition to the Directory of exhibitors, particulars of the various clubs specialising in Plymouth Rocks.

It describes the chief points of both the male bird and hen of each of the standard species of Plymouth Rocks. The Directory can be obtained from Mr. Marsden Chandler, the well-known breeder and exhibitor of Barred Plymouth Rocks, at Fairfield, Brampton, Chesterfield.

## Mr. Tamlin's Exports.

The following is a list of W. Tamlin's exports for March, 1913: three 30, also six 60 and six 100 incubators, six 60 foster mothers, to Ed. Barren, agent for Switzerland; six 60, also six 100 incubators, to Hayward, Young & Co., Agent for Port Elizabeth; six 100, also six 60 and six 30 incubators, to Oakes & Co., agents for Madras; three 60, and three 100 incubators, also three 60 foster mothers, to Treacher & Co., agents for Bombay; thirty 100, ten 60, and six 200 incubators, fifteen 100 and fifteen 60 foster mothers, to Mons. A. Masson, agent for France; six 30, twelve 60, seventeen 100, four 200 incubators, six 60 and six 100 foster mothers, to Messrs. Chandler, agents for Melbourne, Australia; three 30, three 60, also three 100 incubators, three 60, and three 100 foster mothers, to A. F. Phillips & Co., agents for Rhodesia; twenty Hover rearers, to A. Newcomb & Co., agents for New Zealand; six 100 incubators, to H. E. Marcarenhas, agent for Portugal; one 200 incubator, to Valparaiso, order of Bullock & Co.; one 60 incubator and one 60 foster mother, to Miss E. Spring, Newfoundland; one 100 incubator, to W. E. Badcock, Tasmania.

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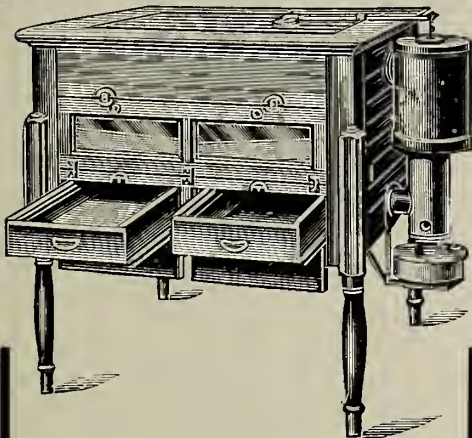
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ENGLISH POULTRY—LONDON MARKETS.					FOREIGN POULTRY—LONDON MARKETS.				
DESCRIPTION.	1st Week.		2nd Week.		3rd Week.		4th Week.		COUNTRIES OF ORIGIN.
	Each.	Each.	Each.	Each.	Each.	Each.	Each.		
Surrey Chickens ...	4/0 to 4/6	4/0 to 5/0	4/0 to 5/0	4/0 to 5/0	4/0 to 5/0	4/0 to 5/0	4/0 to 5/0	Russia .....lb.	
Sussex " .....	4/0 " 4/6	4/0 " 5/0	4/0 " 5/0	4/0 " 5/0	4/0 " 5/0	4/0 " 5/0	4/0 " 5/0	Belgium .....	
Boston " .....	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	France.....	
Essex " .....	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	3/0 " 4/6	United States of America..b.	
Capons .....	5/0 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	5/6 " 6/6	Austria .....	
Irish Chickens .....	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	2/6 " 4/0	Canada .....	
Live Hens.....	2/6 " 3/6	2/6 " 3/6	2/6 " 3/6	2/6 " 3/6	2/6 " 3/6	2/6 " 3/6	2/6 " 3/6	Australia.....	
Aylesbury Ducklings	4/6 " 6/6	5/0 " 6/6	5/0 " 6/6	5/0 " 7/0	5/0 " 7/0	5/0 " 7/0	5/0 " 7/0		
Ducks .....	—	—	—	—	—	—	—		
Geese .....per lb.	—	—	—	—	—	—	—		
Turkeys, English,,	—	—	—	—	—	—	—		
Guinea Fowls .....	3/0 " 3/9	3/0 " 3/9	2/9 " 3/9	2/9 " 3/9	2/9 " 3/9	2/9 " 3/9	2/9 " 3/9		
ENGLISH GAME—LONDON MARKETS.									
DESCRIPTION.	Each.	Each.	Each.	Each.	Each.	Each.	Each.	COUNTRIES OF ORIGIN.	
	Each.	Each.	Each.	Each.	Each.	Each.	Each.		
Grouse .....	—	—	—	—	—	—	—	Russia .....	
Partridges .....	—	—	—	—	—	—	—	France .....	
Pheasants .....	—	—	—	—	—	—	—	Austria-Hungary .....	
Black Game.....	2/3	2/3	2/3	2/3	2/3	2/3	2/6	United States of America .....	
Hares .....	—	—	—	—	—	—	—	Other Countries.....	
Rabbits, Tame.....	1/3 " 2/3	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	1/3 " 2/6	Totals.....	
" Wild .....	/8 " 1/0	/8 " 1/0	/8 " 1/0	/8 " 1/0	/8 " 1/0	/8 " 1/0	/8 " 1/0		
Pigeons, Tame.....	—	—	—	—	—	—	—		
" Wild.....	2/6 " 2/9	2/6 " 2/9	2/6 " 2/9	2/6 " 2/9	2/6 " 2/9	2/6 " 2/9	2/6 " 2/9		
Wild Duck .....	—	—	—	—	—	—	—		
Woodcock .....	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1	1/0 " 1/1		
Hazel Hens.....	1/0 " 1/2	/8 " 1/0	/8 " 1/0	/8 " 1/0	/8 " 1/0	/8 " 1/0	—		
Golden Plover .....	—	—	—	—	—	—	—		
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	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.		
LONDON .....	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	8/6 to 9/6	Russia .....	
Provinces.....	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Denmark .....	
CARLISLE .....	/11	/11	/11	/11	/11	/11	/11	Germany .....	
BRISTOL.....	—	—	—	—	—	—	—	Netherlands .....	
								France .....	
								Italy .....	
								Aust.-Hungary .....	
								Other countries .....	
								Totals .....	



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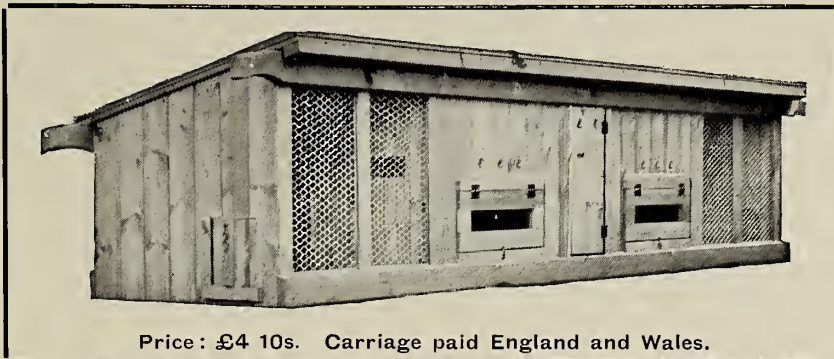
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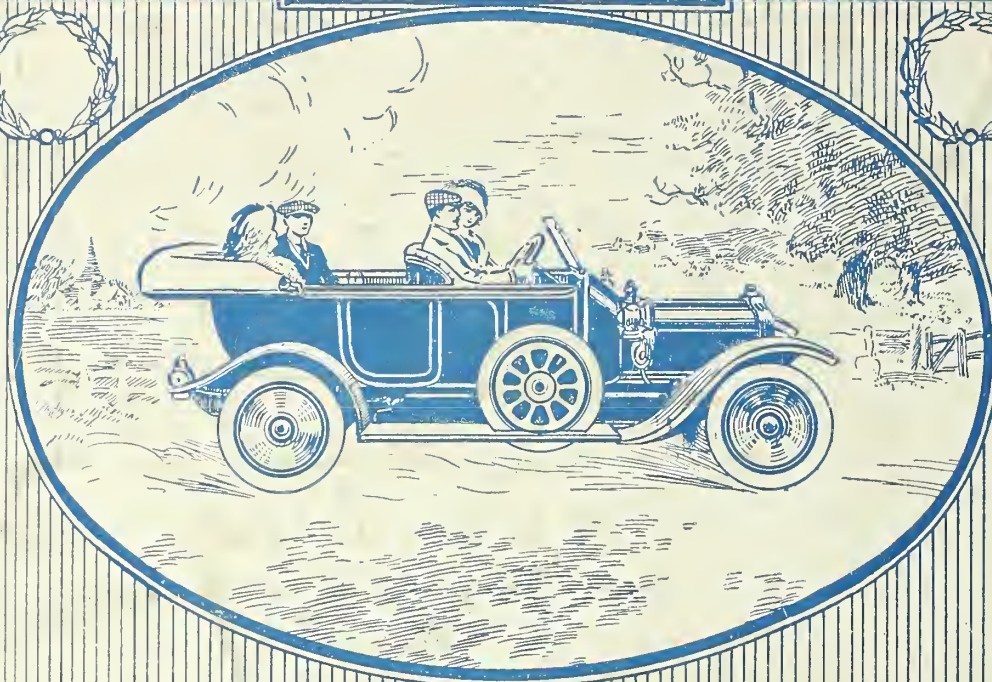
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